Gold Star Co., Ltd.

AMPLIFIER
GSA-6500
TUNER
GST-2000
CASSETTE DECK
GSK-1100

MINI COMPONENT SYSTEM

SERVICE MANUAL

SPECIFICATIONS

A-6500

utput Power (8 ohm)		
continuous	:	30W + 30W
.H.D	:	0.09%
requency Response	:	20-30000Hz
/N Ratio		
PHONO	:	60dB
TUNER/AUX	:	80dB
hannel Separation		
PHONO	:	45dB
TUNER/AUX	:	50dB
ıput Sensitivity		
PHONO	:	2.4mV
TUNER/AUX	:	160mV
e Control		
BASS (100Hz)	:	±10dB
TREBLE (10kHz)	:	±10dB
oudness		
80Hz	:	+7dB
10kHz	:	+3.5dB
ilter		
LOW (30Hz)	:	-10dB
HIGH (10kHz)	:	-10dB
OAD Impedance	:	8-16 ohm
emiconductor	:	16 ICs, 31 TR, 24 DIODEs 1 Fluorescent Display
ower Supply	:	See the back panel
ower Consumption	:	180W (Max.)
eight	:	5.6kg
imension	:	342 (W) x 71 (H) x 275 (D) m/m

T-2000

M SECTION

* Frequency Range	:	87.5-108MHz
* Usable Sensitivity	:	1.8uV
* S/N Ratio	:	65dB
* IF Rejection	:	90dB
* Image Rejection	:	70dB
* Distortion	:	0.15%
* Selectivity (±400kHz)	:	70dB
* Search stop Level (98MHz)	:	10uV
* Output Voltage (75kHz Dev)	:	700mV
* Stereo Separation	:	45dB

* AM SECTION

* Frequency Range	:	531-1602kHz
* Usable Sensitivity	:	316uV/m
* S/N Ratio	:	45dB
* IF Rejection	:	25dB
* Image Rejection	:	40dB
* Distortion	:	1%
* Selectivity (±9kHz)	:	40dB
* Search stop Level (999kHz)	:	5mV/m
* Output Voltage (30% Mod)	:	250mV

* GENERAL

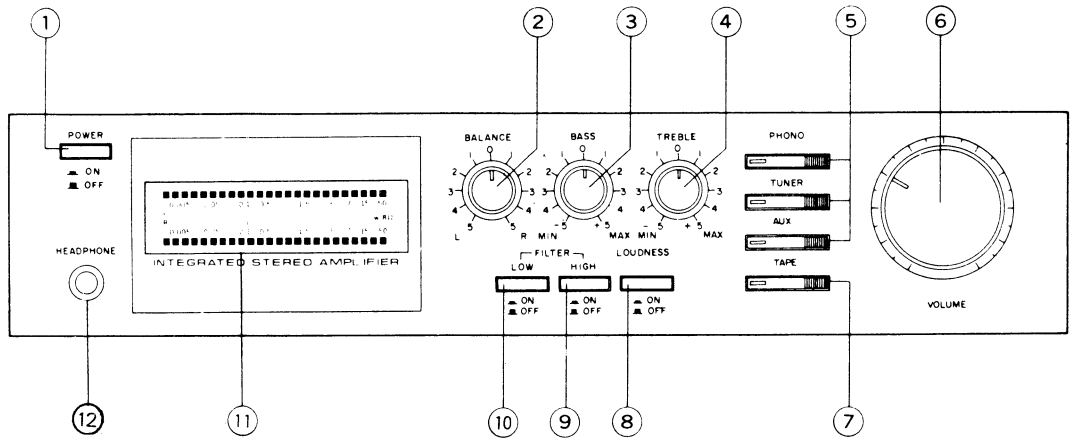
* Power Supply	:	See the back panel
* Semiconductor	:	12IC, 5 FET, 29 TR, 63 DIODE 1 Fluorescent Display
* Power Consumption	:	6W (Max)
* Weight	:	3.4Kg
* Dimension	:	342(W) x 71 (H) x 275 (D) m/m

GSK-1100

* Track System	:	4 Track 2CH Stereo
* Tape Speed	:	4.75cm/sec
* Wow & Flutter	:	0.15% (WRMS)
* F.F/REW Time	:	110 Sec (C-60)
* Frequency Response		
METAL	:	30-15000Hz
FeCr	:	30-15000Hz
CrO_2	:	30-15000Hz
* Distortion	:	1% (1kHz, OVU)
* S/N Ratio		
DOLBY ON	:	60dB
DOLBY OFF	:	50dB
* Cross Talk	:	60dB
* Channel Separation	:	40dB
* Erase Ratio	:	70dB
* Input Sensitivity	:	Mic : 2mV Line : 100mV Din : 0.1mV/K ohm
* Output Voltage	:	1V
* Headphone Imp	:	8-200 ohm
* Power Supply	:	See the back panel
* Semiconductor	:	6IC, 48TR, 31LED, 31 DIODE, 3 RECTIFIER
* Weight	:	6.1Kg
* Dimension	:	342(W) x 158(H) x 282(D) m/m

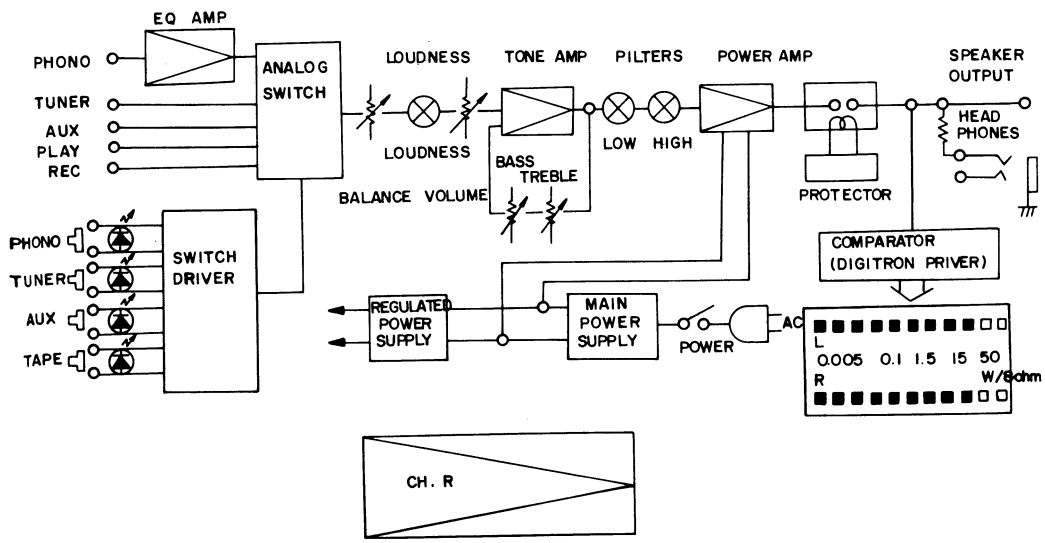
GSA-6500

CONTROLS



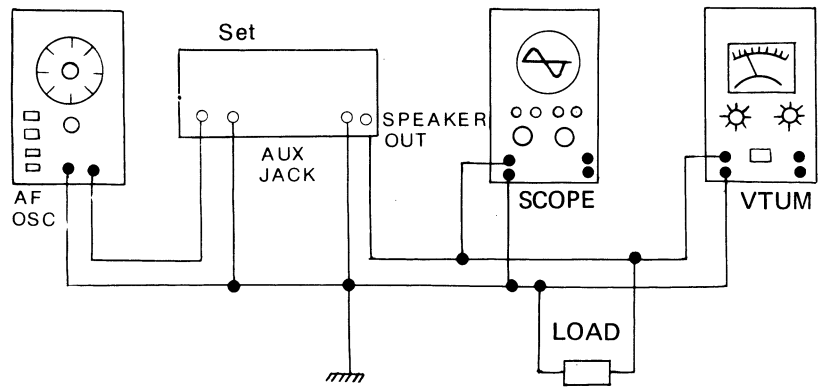
1. Power Switch
2. Balance Control Knob
3. Bass Control Knob
4. Treble Control Knob
5. Function Selection Buttons
6. Volume Adjusting Knob
7. Tape Button
8. Loudness Button
9. High Filter Button
10. Low Filter Button
11. Fluorescent Display
12. Headphone Jack

BLOCK DIAGRAM



ADJUSTMENT OF IDLING CURRENT

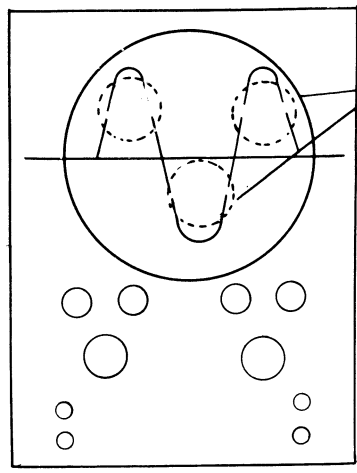
1) CONNECTION



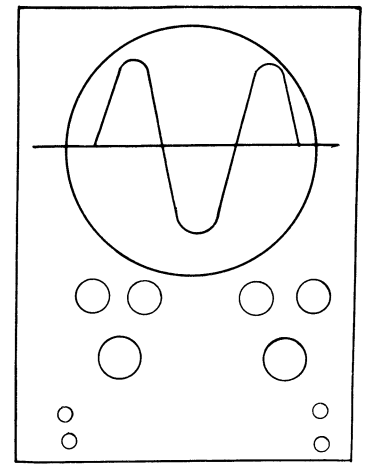
1. Set the FUNCTION selector to AUX position, VOLUME control to minimum and the other controls and/or switches – BALANCE, BASS, TAPE MONITOR etc to mid or OFF position.
2. Adjust the oscillator frequency to 1 kHz and output level to 150mV, then connect the output to the AUX input jacks both left & right channel.
3. Connect dummy loads which have 8 ohm non inductive resistance and with stand more than 30 watt power to the left & right speaker terminal.
4. Connect oscilloscope and VTVM across dummy loads.
5. Turn on the POWER switch and wait five or ten minutes for warm-up.
6. Up the VOLUME control slowly until the output power is around 1 watt (VTVM indicates 2.83 volt).
7. Change the oscillator frequency to 10 kHz.
8. Watching the oscilloscope adjust VR501 (left channel) and VR551 (right channel) until the crossover disappear. To find crossover easily, enlarge the wave form at the oscilloscope.
9. After that check the voltage drop across R516 or R517 (left channel) and R566 or R567 (right channel) is less than 10mV DC when no input signal.
10. If the voltage drop is more than 10mV, repeat step 8 and 9.
11. After finishing the adjustment fix the VR501 and VR551 using screw locking paint.

note:
When adjust VR501 and/or VR551, do not turn it to fully clockwise position. Sometimes it cause driver or power transistor burn out.

2) BEFORE ADJUSTMENT

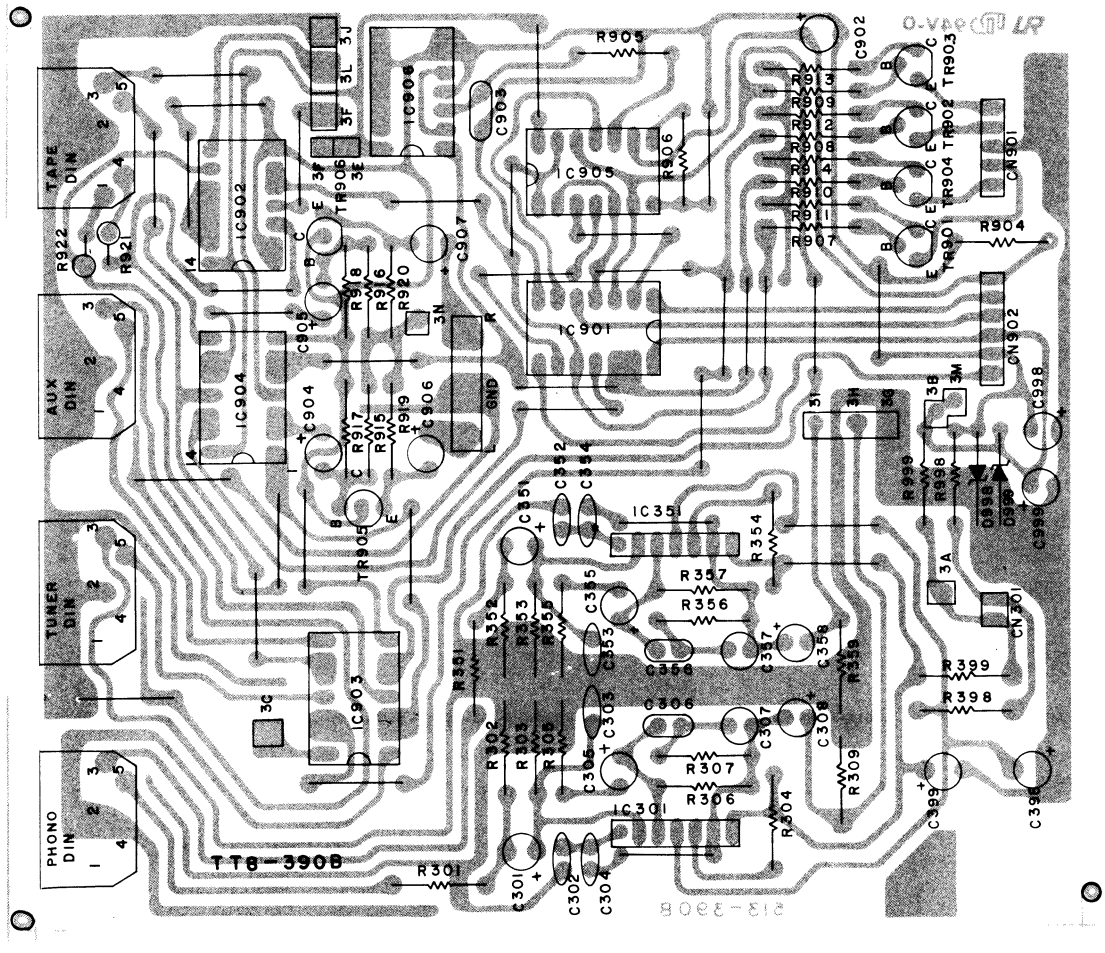


3) AFTER ADJUSTMENT

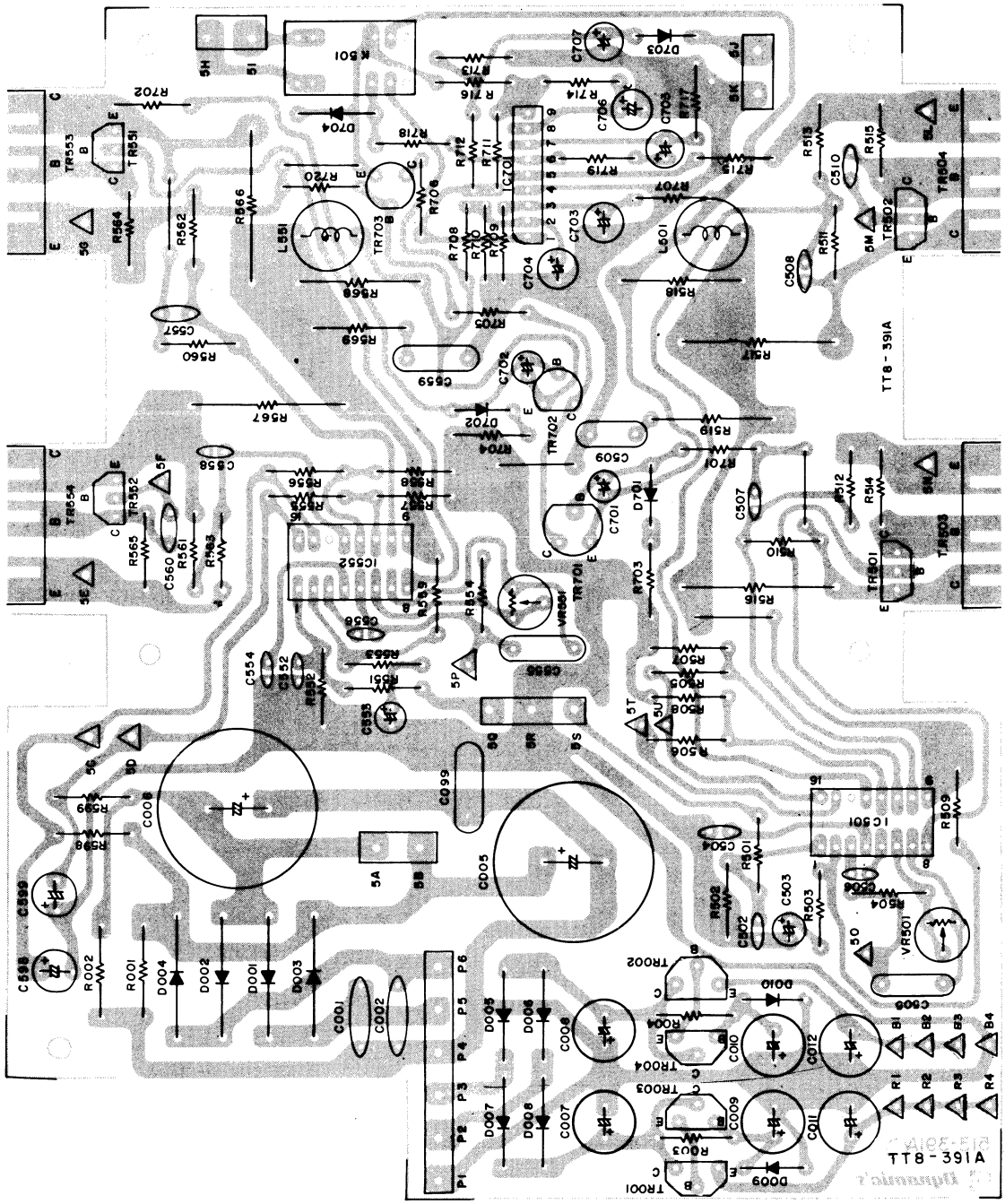


PWB ASSEMBLY

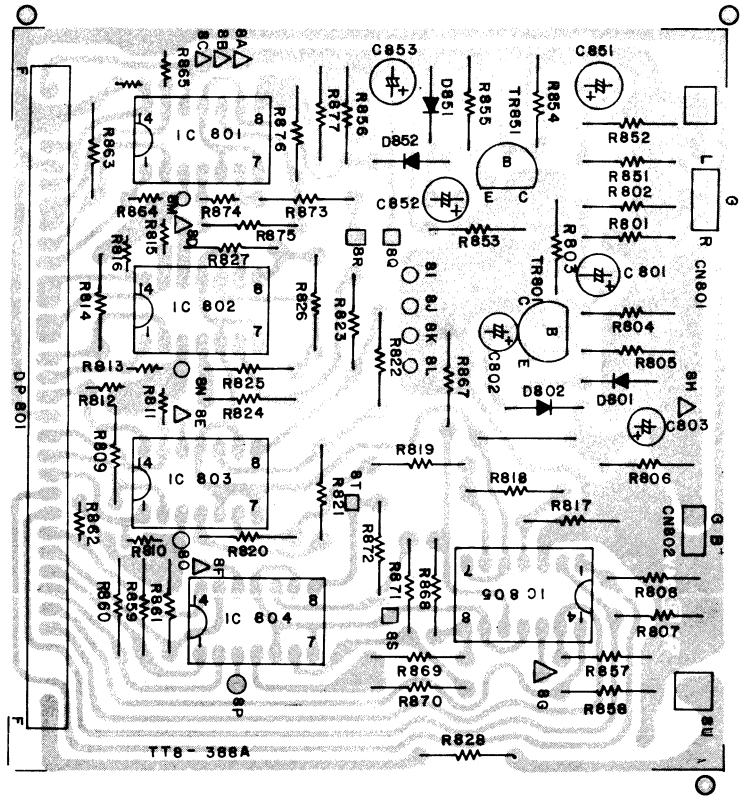
PWB AY. EQ AMP (511-390B)



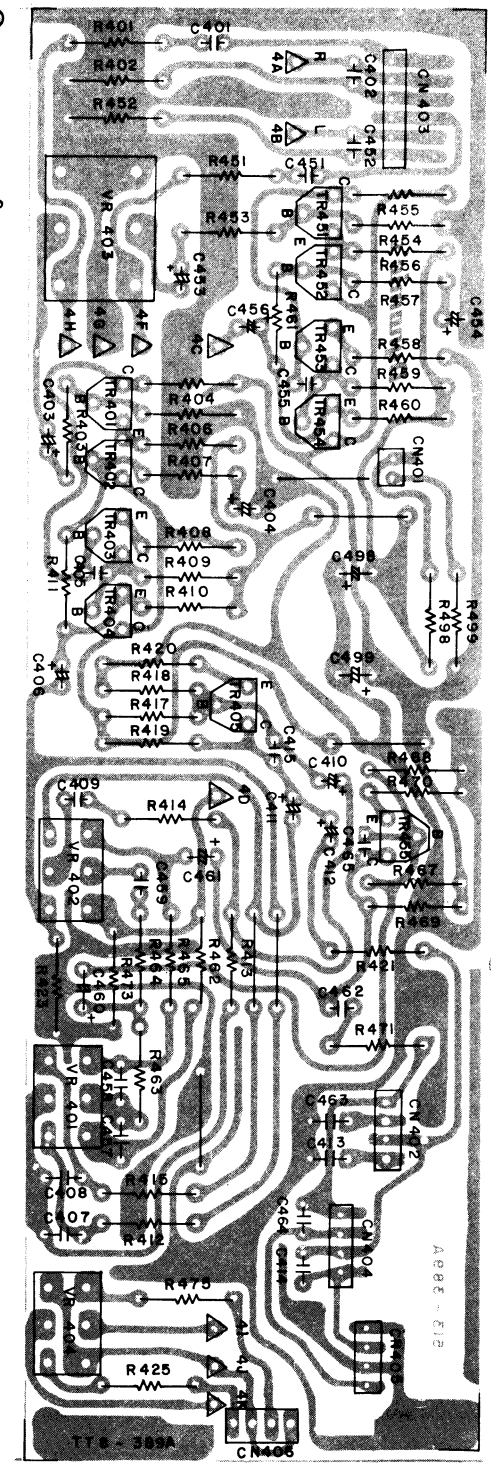
PWB AY, MAIN AMP (511-391A)



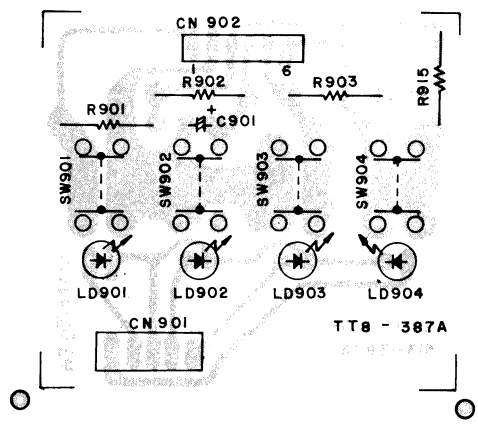
PWB AY, DISPLAY (511-388A)



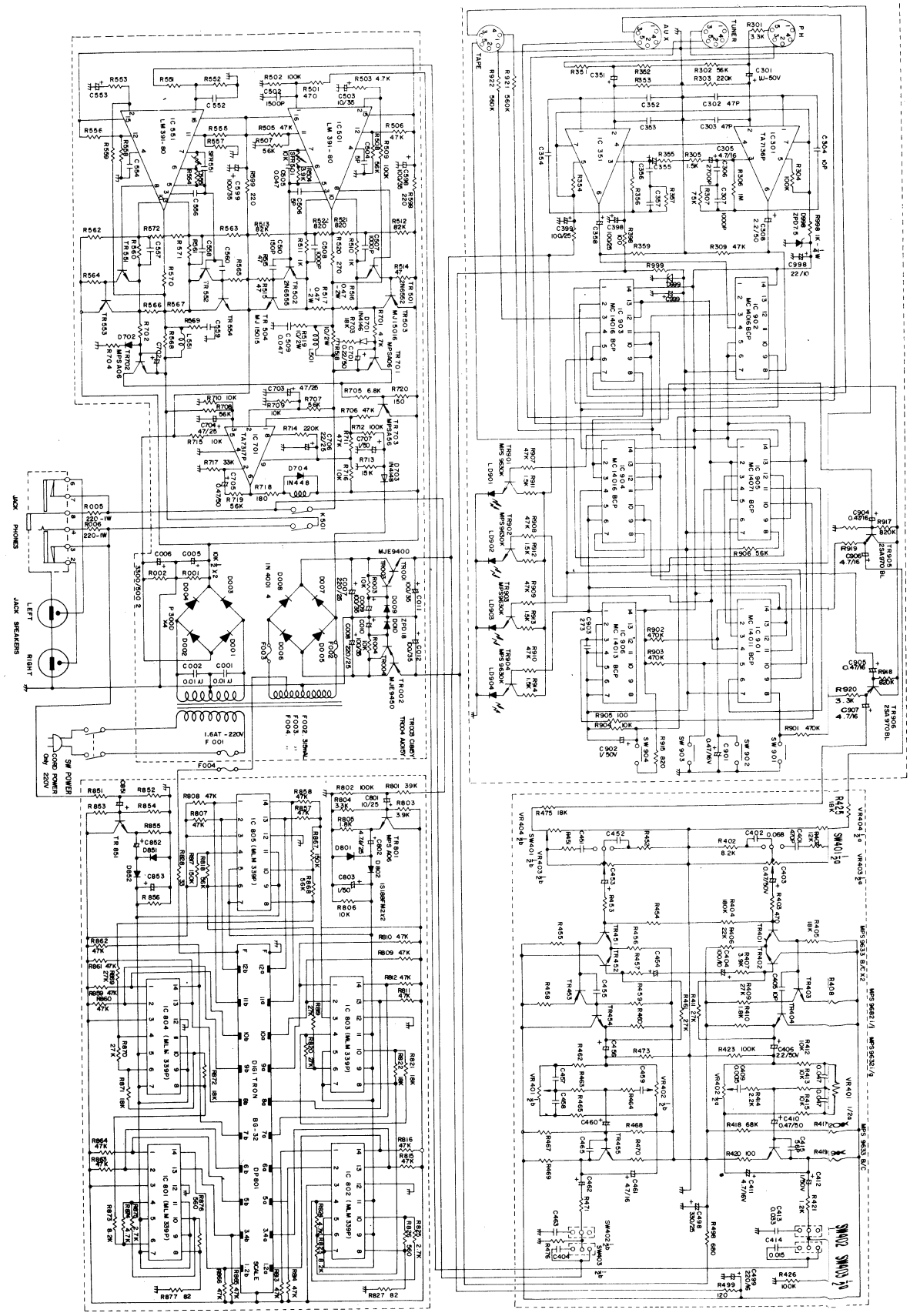
PWB AY, TONE AMP (511-389A)



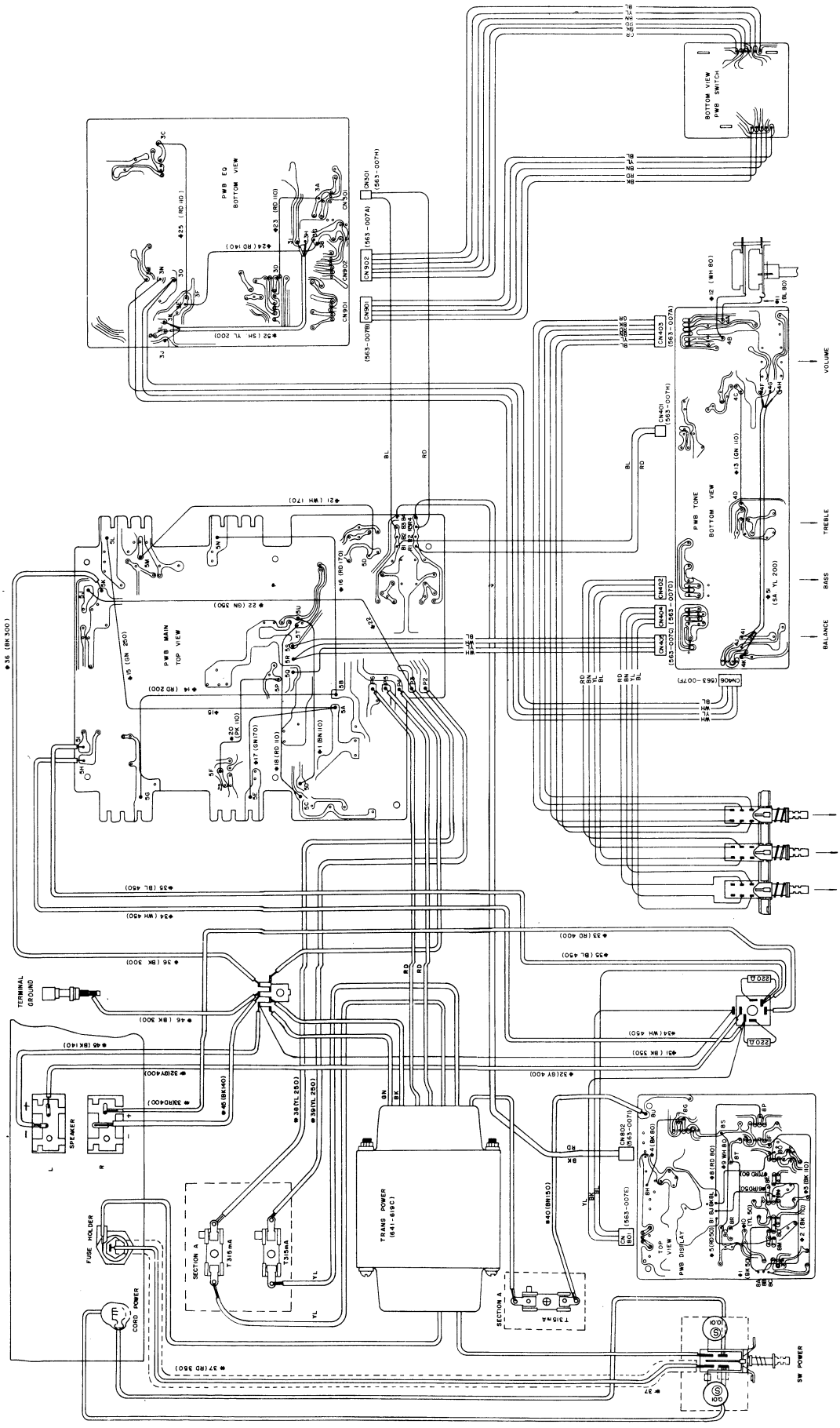
PWB AY, SWITCH (511-387A)



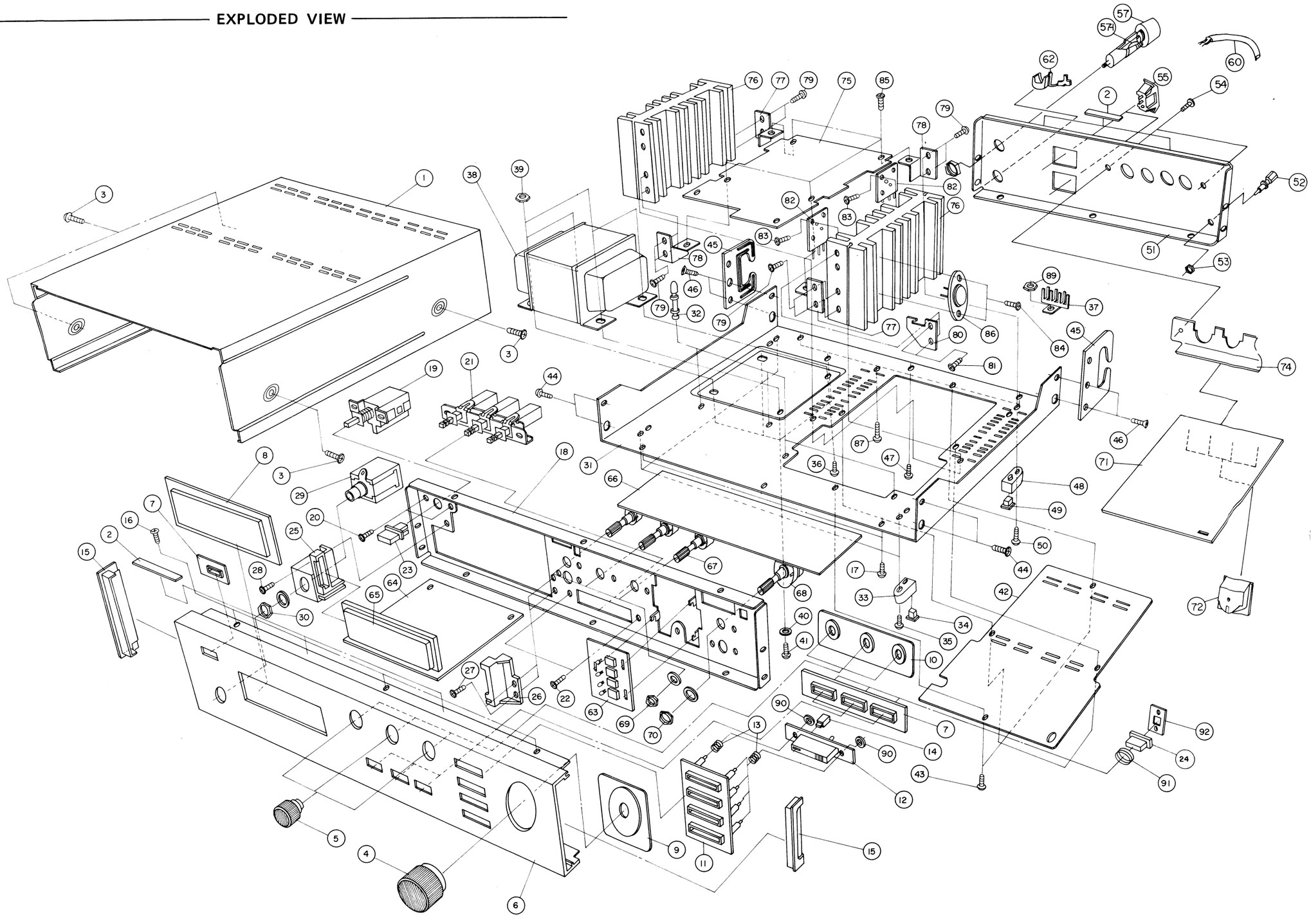
SCHEMATIC DIAGRAM



WIRING DIAGRAM



EXPLODED VIEW



MECHANICAL PARTS LIST

NO.	PART NO.	DESCRIPTION
1	213-178A	CABINET
2	472-604A	FELT
3	353-052B	SCREW SPECIAL
4	272-073A	KNOB VOLUME
5	273-249A	KNOB CONTROL
6	258-307B	PANEL FRONT
7	341-121A	BUSHING PUSH KNOB
8	236-115A	WINDOW
9	246-021A	DECORATION KNOB
10	246-020A	DECORATION PLATE
11	341-118A	BUSHING FUNCTION KNOB
12	273-235A	KNOB FUNCTION
13	442-634D	SPRING COIL
14	463-002A	LENS FUNCTION KNOB
15	221-354A	COVER SIDE
16	TCQ1836J	SCREW TCQ 2 + 3 x 8 FZMY
17	TRR1836J	SCREW TRR 3 x 8 FZMY
18	313-154B	CHASSIS FRONT
19	554-610A	SW PUSH POWER
20	MRC1830J	SCREW MRC 3 x 6 FZMY
21	554-606C	SW. UNI PUSH SUF 34
22	MRC1830J	SCREW MRC 3 x 6 FZMY
23	273-238B	KNOB PUSH
24	273-238A	KNOB PUSH
25	321-299A	BRACKET DIGITRONL
26	321-300A	BRACKET DIGITRONR
27	TRR1836J	SCREW TRR 3 + 3 x 8 FZMY
28	TRR1830J	SCREW TRR 3 + 3 x 6 FZMY
29	572-601A	JACK. HEAD PHONE
30		HEXAGON NUT w/WASHER
31	313-155B	CHASSIS MAIN
32	321-303A	BRACKET PWB MAIN
33	264-004A	LEG
34	477-013A	RUBBER LEG
35	TRR1836J	SCREW TRR 3 + 3 x 8 FZMY
36	MRC1830J	SCREW MRL 3 + 3 x 6 FZMY
37	563-056A	TERMINAL EARTHING
38	641-619C	TRANS POWER
39	NHA2200J	NUT
40	WSB2600D	WASHER SPRING

NO.	PART NO.	DESCRIPTION
41	MRC2241J	SCREW MRC 4 x 12
42	221-358A	COVER PLATE
43	TRR1830J	SCREW TRR 3 x 6 FZMY
44	TRR1830J	SCREW TRR 3 + 3 x 6 FZMY
45	445-052A	SPACER
46	TCQ1836J	SCREW TCQ 3 x 8 FZMY
47	TRR1830J	SCREW TRR 3 + 3 x 6 FZMY
48	264-004A	LEG
49	477-013A	RUBBER LEG
50	TRQ1843J	SCREW TRQ 3 x 14
51	258-362B	PANEL BACK
52	563-606A	TERMINAL GROUND
53		
54	TRQ1836I	SCREW TRQ 2 + 3 x 8 FBK
55	573-607A	SOCKET DIN
57-1	585-112C	FUSE 250V 1.6A
57	586-107B	FUSE HOLDER
58	552-050A	SLIDE SWITCH
59	MRC1822I	SCREW MRC 3 x 4 FBK
60	681-003D	CORD POWER
61	334-007A	STOPPER SWITCH
62	324-348A	HOLDER CORD HEYCO
63	511-387A	PWB AY SWITCH
64	513-388A	PWB DISPLAY
65	659-002A	DISPLAY FLUORESCENT BG32
66	513-389A	PWB TONE AMP
67	611-612D	VR.
68	611-069B	VR.
69		
70		
71	513-390B	PWB EQ AMP
72	573-051A	SOCKET, DIN
73	573-062A	SOCKET
74	321-483A	Bracket
75	513-391A	PWB. MAIN AMP
76	255-052A	PLATE HEAT SINK
77	324-301A	HOLDER A (R)
78	324-302A	HOLDER B (L)
79	TRQ1830J	SCREW TRQ 2 + 3 x 6 FZMY
80	321-302A	BRACKET PWB EQ
81	TRQ1830J	SCREW TRQ 2 + 3 x 6 FZMY
82	573-050A	SOCKET AY TR
83	TRQ1836J	SCREW TRQ 2 + 3 x 8 FZMY
84	MRC1843J	SCREW MRC 3 x 14 FZMY

NO.	PART NO.	DESCRIPTION
85	TRR1830J	SCREW TRR 3 + 3 x 6 FZMY
86	665-806A	TRANSISTOR
	665-807A	TRANSISTOR
87	TRQ1843J	SCREW TRQ 2 + 3 x 14 FZMY
88		
89	NHA1800D	NUT
90	WPL1500J	WASHER APL-2.6
91	442-634E	SPRING COIL
92	384-043A	GUIDE KNOB

ELECTRICAL PARTS LIST

PWB AY, DISPLAY (511-388A)

SYMBOL NO.	PART NO.	DESCRIPTION
DP801	659-002A	DISPLAY, FLUORESCENT BG-32
IC801, 802, 803, 804, 805	608-045A	IC, MLM 339P. (COMPARATOR)
TR801, 851	662-603B	TRANSISTOR, FAIR-MOTOR, MPSA06
D801, 802, 851, 852	651-020A	DIODE 1S188FM-2
C801, 851	CE106D01	ELECTROLYTIC 10MF 26V
C802, 852	CE475D01	C. ELECTROLYTIC 4.7MF 25V
C803, 853	CE105F01	" 1MF 50V
R825, 26, 27, 77	RD271J09	R. CARBON FILM 270-J¼WM
R824	RD153J09	" 15K-J¼WM
R826, 876	RD561J09	" 560-J¼WM
R805, 855	RD182J09	" 1.8K-J¼WM
R804, 854	RD332J09	" 3.3K-J¼WM
R801, 851, 803, 853	RD392J09	" 3.9K-J¼WM
R822, 872, 806, 856	RD103J09	" 10K-J¼WM
R823, 873	RD123J09	" 12K-J¼WM
R874	RD153J02	" 15K-J¼WM
R821, 71	RD273J09	" 27K-J¼WM
R820, 870	RD393J09	" 39K-J¼WM
R819, 869	RD563J09	" 56K-J¼WM
R818, 868	RD124J09	" 120K-J¼WM
R802, 852	RD104J09	" 100K-J¼WM
R807, 08, 09, 14, 57, 58, 59 60, 61, 63	RD473J09	" 47K-J¼WM
R817, 867	RD683J09	" 68K-J¼WM
R810, 11, 12, 13, 15, 16, 62 64, 65, 66	RD473J02	" 47K-J¼WM
R828	RD330J09	" 33-J¼WM
CN801	561-008A	CONNECTOR MALE(3P)
CN802	561-008B	CONNECTOR MALE(2P)

PWB AY, TONE AMP (511-389A)

SYMBOL NO.	PART NO.	DESCRIPTION
VR403	611-069B	VR, R GJ70E-100KB x 2 L(30KQ)
VR401, 402	611-612D	VR, R GM70E-100KB x 2 30KQ(11C)
VR404	611-611B	VR, R GM70R-250KMN 30KQ(C,C)
TR401, 402, 451, 452, 405 455	662-026B,C	MPS9633B,C, TR MOTOROLA
TR403, 453	662-605D,E	MPS9682i, J, "
TR404, 454	662-034D,E	MPS9632i, J, "
C412, 462	CE105C01	C, ELECTROLYTIC 1MF 16V
C411, 461	CE475C01	" 4.7MF-16V
C404, 454	CE107B01	" 100MF-10V
C499, 498	CE337D01	" 330MF-25V
C405, 455	CC100K01	C. CERAMIC CC 10PF-K SL 50V
C415, 465	CC560K01	C. CERAMIC CC 56PF-K SL 50V
C409, 459	CQ222J01	C. POLYESTER 0.0022MF-J 50V
C407, 408, 457, 458	CQ473J01	C. POLYESTER 0.047MF-J 50V
C414, 464	CQ153J01	C. POLYESTER 0.015MF-J 50V
C413, 463	CQ333J01	C. POLYESTER 0.033MF-J 50V
C401, 451	CY471J01	C. POLYSTYROL 470PF-J R
C402, 452	CQ683M01	C. POLYESTER 0.068MF 50V
R408, 458	RD101J09	R. CARBON FILM 100-J¼WM
R403, 454	RD471J09	R. CARBON FILM 470-J¼WM
R421, 71	RD122J09	R. CARBON FILM 1.2K-J¼WM
R410, 460	RD182J09	R. CARBON FILM 1.8K-J¼WM
R414, 64	RD222J09	R. CARBON FILM 2.2K-J¼WM
R407, 57	RD681J09	R. CARBON FILM 680-J¼WM
R419, 69, 07, 57	RD392J09	R. CARBON FILM 3.9K-J¼WM
R402, 52	RD822J09	R. CARBON FILM 8.2K-J¼WM
R412, 13, 15, 62, 63, 65	RD103J09	R. CARBON FILM 10K-J¼WM
R401, 51	RD123J09	R. CARBON FILM 12K-J¼WM
R405, 55, 25, 75	RD183J09	R. CARBON FILM 18K-J¼WM
R405, 56	RD223J09	R. CARBON FILM 22K-J¼WM
R409, 59, 11, 61	RD273J09	R. CARBON FILM 27K-J¼WM
R418, 68	RD563J09	R. CARBON FILM 56K-J¼WM
R423, 473	RD104J09	R. CARBON FILM 100K-J¼WM
R404, 454	RD184J09	R. CARBON FILM 180K-J¼WM
R417, 67	RD824J09	R. CARBON FILM 820K-J¼WM
CN401	561-011A	CONNECTOR MALE(2P)
CN404, 405	561-011B	CONNECTOR MALE(4P)
CN403	561-011D	CONNECTOR MALE(6P)
C403, 53, 10, 60	CE474F01	C. ELECTROLYTIC 0.47MF 50V
C406, 56	CE225D01	C. ELECTROLYTIC 2.2MF 25V
R499	RD391J09	R. CARBON FILM 390-J¼WM
R420, 470	RD683J09	R. CARBON FILM 68K-J¼WM

PWB AY, EQ AMP (511-3908)

SYMBOL NO.	PART NO.	DESCRIPTION
IC901	668-046A	IC, MC 14011 BCP(NAND GATE)
IC902, 903, 904	668-047A	IC, MC 14016 BCP ANALOG SWITCH
IC301, 351	668-049A	IC, KIA7136P (AUDIO PRE)
TR901, 902, 903, 904	662-024F	MPS9630K, TR MOTOROLA
IC906	668-057A	IC, MC14013BCP (D FILP FLOP)
IC905	668-058A	IC, MC14071BCP (OR GATE)
D998	654-608E	DIODE, ZENER ZPD7.5 ITT
C902, 903	CE224F01	C. ELECTROLYTIC 0.22MF-50V
C308, 58	CE225D01	C. ELECTROLYTIC 2.2MF 25V
C301, 51, 902	CE105D01	C. ELECTROLYTIC 1MF 25V
C398, 99	CE107D01	C. ELECTROLYTIC 100MF-25V
C306, 356	CQ272J01	C. POLYESTER 0.0027MF-J 50V
C307, 57	CY102J01	C. POLYSTYROL 1000PF-JR
C304, 54	CC100K01	C. CERAMIC CC 10pF-K SL 50V
C302, 03, 52, 53	CC470K01	C. CERAMIC CC 47pF-K SL 50V
C305, 355	CE476C01	C. ELECTROLYTIC 47MF 16V
R998, 999	RD102J09	R. CARBON FILM 1K-J¼WM
R301, 51	RD332J09	R. CARBON FILM 3.3K-J¼WM
R904	RD103J09	R. CARBON FILM 10K-J¼WM
R907, 08, 09, 10, 309, 359	RD473J09	R. CARBON FILM 47K-J¼WM
R302, 52, 906	RD563J09	R. CARBON FILM 56K-J¼WM
R307, 52,	RD753J09	R. CARBON FILM 75K-J¼WM
R304, 54	RD104J09	R. CARBON FILM 100K-J¼WM
R303, 53	RD224J09	R. CARBON FILM 220K-J¼WM
C903	CQ273J01	C. POLYESTER 0.027MF-J 50V
R306, 56	RD105J09	R. CARBON FILM 1M-J¼WM
R305, 355, 911, 912, 913 914	RD152J09	R. CARBON FILM 1.5K-J¼WM
R398, 399, 905	RD101J09	R. CARBON FILM 100-J¼WM
CN901, 902	561-011C	CONNECTOR MALE (5P)
CN301	561-011A	CONNECTOR MALE (2P)
CN302	563-007F	CONNECTOR AY MOLEX (2P)
CN902	561-011D	CONNECTOR MALE (6P)
	CE226B01	C. ELECTROLYTIC 22MF 10V
TR905, 906	665-818B	TR, KEC KTA970-BL
C904, 905	CE474C01	C, ELECTROLYTIC 0.47MF 16V
C906, 907	CE475C01	" 4.7MF 16V
R917, 918	RD824J09	R, CARBON FILM 820K-J¼WM
R919, 920	RD332J09	" 3.3K-J¼WM
R921, 922	RD564J02	" 560K-J¼WM

PWB AY, MAIN AMP (511-391A)

SYMBOL NO.	PART NO.	DESCRIPTION
24V DC, K501	557-003A	A RELAY, HB2-DC24V
24V DC, K501	557-005A	RELAY ORIGINAL OUB DC-24V DPDT
IC501, 551	668-048A	IC, LM391-80 (AUDIO DRIVER)
IC701	668-050A	IC TA7137P
TR504, 554	665-806A	MJ15015, TR MOTOROLA
TR503, 553	665-807A	MJ15016, TR MOTOROLA
TR501, 551	665-809B	2N 6552, TR MOTOROLA
TR502, 552	665-810B	2N 6555, TR MOTOROLA
TR701, 702	662-603B	MPSA06, TR MOTOROLA
TR703	662-043B	MPSA56, TR MOTOROLA
TR001	662-018A	MJE9400, TR MOTOROLA
TR002	662-018B	MJE9450, TR MOTOROLA
TR003	665-813B	TR, TOSHIBA, 2SA-1015-Y
D009, 010	654-607D	DIODE, ZENER, ZPD-18, ITT
D701, 702, 703, 704	652-603A	DIODE, SWITCHING, IN4148, ITT
D001, 002, 003, 004	652-010C	DIODE, RECTIFIER P300D GI
	652-607A	DIODE, RECTIFIER, IN5402 MICRO
D005, 006, 007, 008	652-005A	DIODE, RECTIFIER IN4001
C005, 006	CE338E14	C' ELECTRO 3300M-35V TSL-SELF
C009, 010, 011, 012, 598, 599	CE107E01	C. ELECTROLYTIC 100MF 35V
C007, 008	CE227D01	C. ELECTROLYTIC 220MF 25V
C503, 553	CE106E01	C. ELECTROLYTIC 10MF-35V
C704, 703	CE476D01	C. ELECTROLYTIC 47MF-25V
D706	CE226D01	C. ELECTROLYTIC 25V-22MF
TR004	665-812B	TR, TOSHIBA, 2SC-1815-Y
C707	CE105E01	C. ELECTROLYTIC 1MF 35V
C705	CE474E01	C. ELECTROLYTIC 0.47MF 35V
C701, 702	CE224F01	C. ELECTROLYTIC 0.22MF-50V
C505, 555, 09, 59	CQ473M01	C. POLYESTER 0.04MF M 50V
C504, 554, 506, 556	CC050C06	C. CERAMIC CC 5pF-C CH 50V
C502, 552	CK152Z02	C. CERAMIC CK 0.0015M-Z 50V
C507, 57, 08, 58	CK102Z02	C. CERAMIC CK 1000pF-Z 50V
C001, 002	CK103P03	C. CERAMIC CK 0.01MF-P 500V
SFR501, 551	613-002F	VR, SEMI-FIXED SR19R-10KB 10D
R516, 17, 66, 67	RNR47J07	R. METAL FILM 0.47J2WP
R519, 569	RN2R2J05	R. METAL FILM 2.2-J1WP
R518, 68	RS100J07	R. METAL OXIDE 10-J2WP

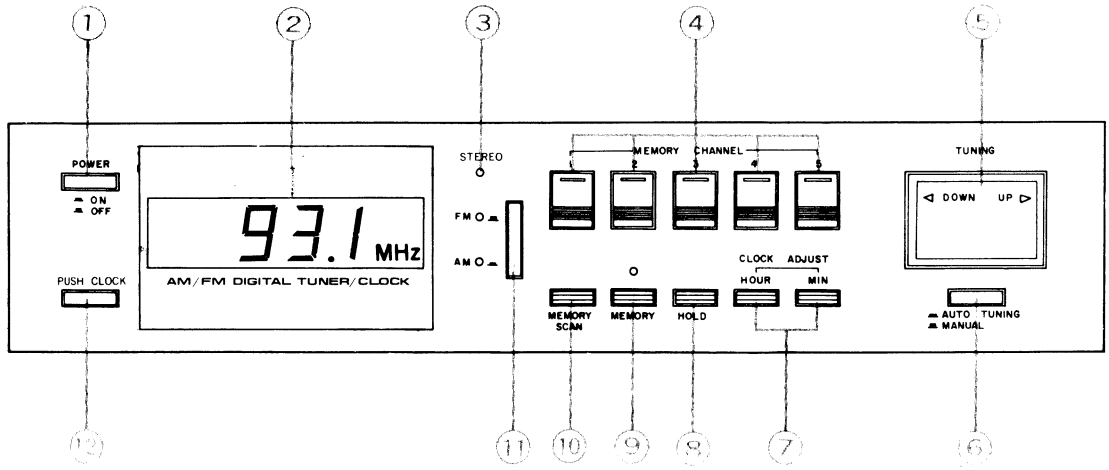
SYMBOL NO.	PART NO.	DESCRIPTION
C510, 60	CC470J06	C. CERAMIC CC 47pF-JCH 50V
R515, 14, 65, 64	RN470J19	R. METAL FILM 47-J½WM
R720, 598, 599	RD151J09	R. CARBON FILM 150-J¼WM
R718	RD181J09	" 180-J¼WM
R501, 551	RD471J09	" 470-J¼WM
R510, 11, 60, 61	RD102J09	" 1K-J¼WM
R701, 02	RD222J09	" 2.2K-J¼WM
R504, 54	RD392J09	" 3.9K-J¼WM
R503, 53	RD472J09	" 4.7K-J¼WM
R705	RD682J09	" 6.8K-J¼WM
R001, 002	RD103J03	" 210K-J½WM
R715, 716, 003, 004	RD103J09	" 10K-J¼WM
R713	RD153J09	" 15K-J¼WM
R703, 704	RD183J09	" 18K-J¼WM
R717	RD333J09	" 33K-J¼WM
R706, 711, 555, 56, 05, 06	RD473I09	" 47K-J¼WM
R507, 08, 57, 58, 707, 08 09, 10, 19	RD563J09	" 56K-J¼WM
R512, 13, 62, 63	RD823J09	" 82K-J¼WM
R509, 559, 502, 52, 712	RD104J09	" 100K-J¼WM
R714	RD224J09	" 220K-J¼WM
L501, 551	636-603B	COIL CHOKE
CN406, 301, 302	563-007H	CONNECTOR AY MOLEX 2P
CN501	563-007C	CONNECTOR AY MOLEX 4P
CN802	563-007I	CONNECTOR AY MOLEX 2P
	564-022A	PLUG AY 12 PIN

PWB AY, SWITCH (511-387A)

SYMBOL NO.	PART NO.	DESCRIPTION
SW901, 902, 903, 904	558-001A	SW, SOFT TOUCH
LD901, 902, 903, 904	653-604A	LED, SIEMENS, LD30A, RD, DIFFUSED
R901, 902, 903	RD474K09	R. CARBON FILM 470K-K¼WM
R915	RD821K09	R. CARBON FILM 820-K¼WM
CN901	563-007B	CONNECTOR AY MOLEX (5P)
	CE474D01	C. ELECTROLYTIC 0.47MF 25V
CN902	563-007A	CONNECTOR AY MOLEX (6P)

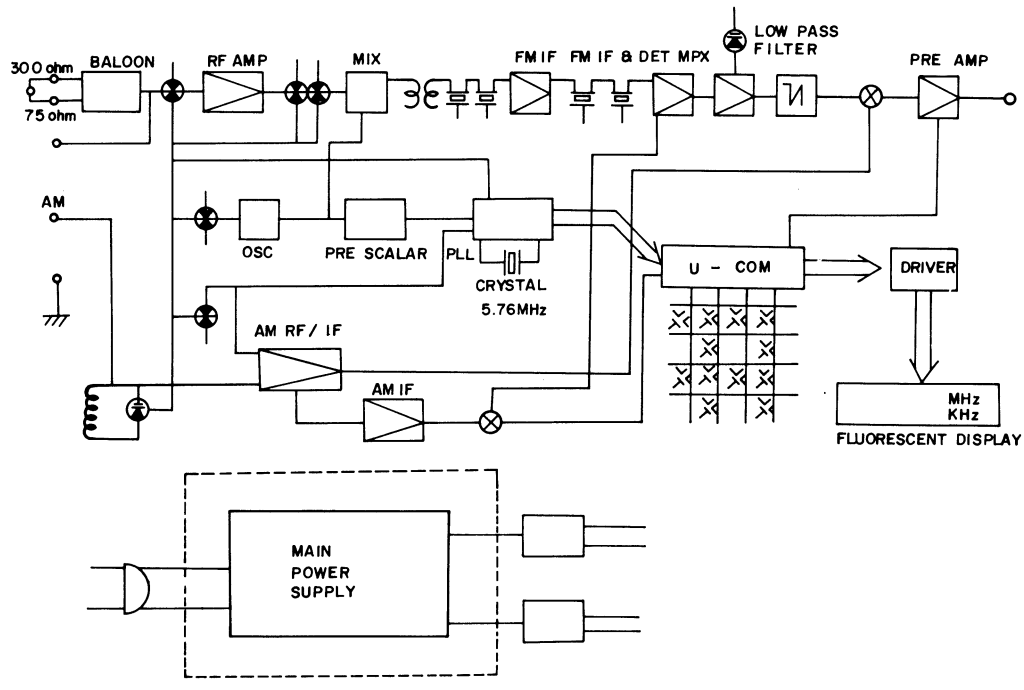
GST-2000

CONTROLS



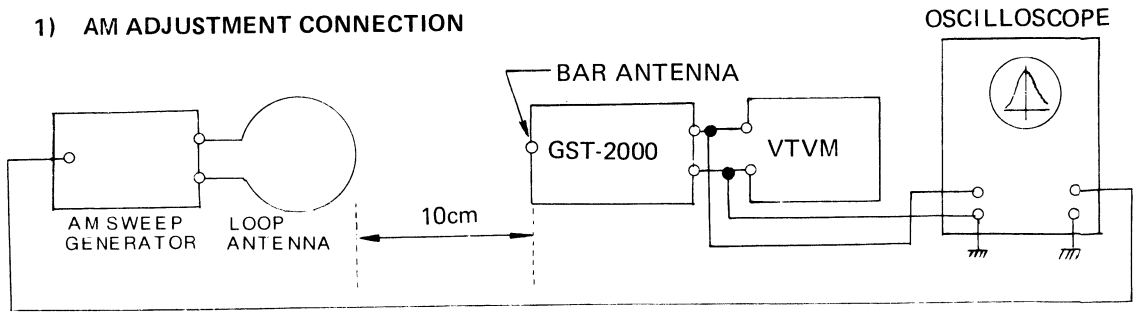
1. Power Switch
2. Fluorescent Display
3. Stereo Indicator
4. Memory Channel Button
5. Tuning Button
6. Auto/Manual Select Button
7. Clock Adjust Button
8. Hold Button
9. Memory Button
10. Memory Scan Button
11. Radio Band Select Button
12. Clock Indication Button

BLOCK DIAGRAM



ADJUSTMENT OF AM/FM

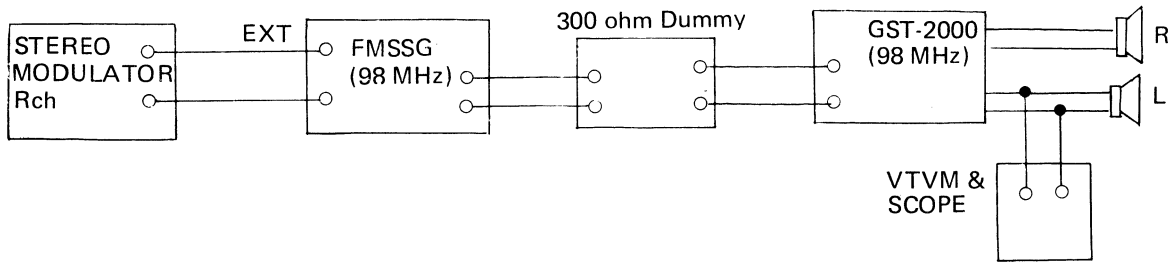
1) AM ADJUSTMENT CONNECTION



2) AM ADJUSTMENT CHART

BAND	STEP	INSTRUMENT & FREQUENCY	TEST POINT	RADIO DIAL SETTING	ADJUSTMENT	REMARKS
IF	1	IF GENESCOPE 460 kHz	GENESCOPE input: TP102 (R115)	TUNING GANG FULLY CLOCKWISE HIGHEST FREQUENCY	T101, T102	ADJUST FOR MAXIMUM INDICATION
COVER RANGE	2	SIGNAL GENERATOR 531 kHz	4A, 4C (R407, R457)	TUNING GANG FULLY COUNTER CLOCKWISE LOWER FREQUENCY	L102	ADJUST FOR MAXIMUM INDICATION
	3	SIGNAL GENERATOR 1602 kHz	4A, 4C (R407, R457)	TUNING GANG FULLY CLOCKWISE HIGHEST FREQUENCY	TC102	ADJUST FOR MAXIMUM INDICATION
	4	REPEAT STEPS 2 AND 3 AS REQUIRED				
TRACKING	5	SIGNAL GENERATOR 600 kHz	4A, 4C (R407, R457)	TUNE TO SIGNAL	AM ANT COIL	ADJUST FOR MAXIMUM INDICATION
	6	SIGNAL GENERATOR 1400 kHz	4A, 4C (R407, R457)	TUNE TO SIGNAL	TC101	ADJUST FOR MAXIMUM INDICATION
	7	REPEAT STEPS 5 AND 6 AS REQUIRED				
SEARCH STOP LEVEL	8	SIGNAL GENERATOR 999 kHz	DC VOLTMETER across SFR 102	TUNE TO SIGNAL	T103	ADJUST FOR MAXIMUM INDICATION
	9	SIGNAL GENERATOR 999 kHz input: 5mV/m	DC VOLTMETER TP204 (D844 or D845)	TUNE TO SIGNAL	SFR102	ADJUST FOR 4-4.5V

3) FM ADJUSTMENT CONNECTION



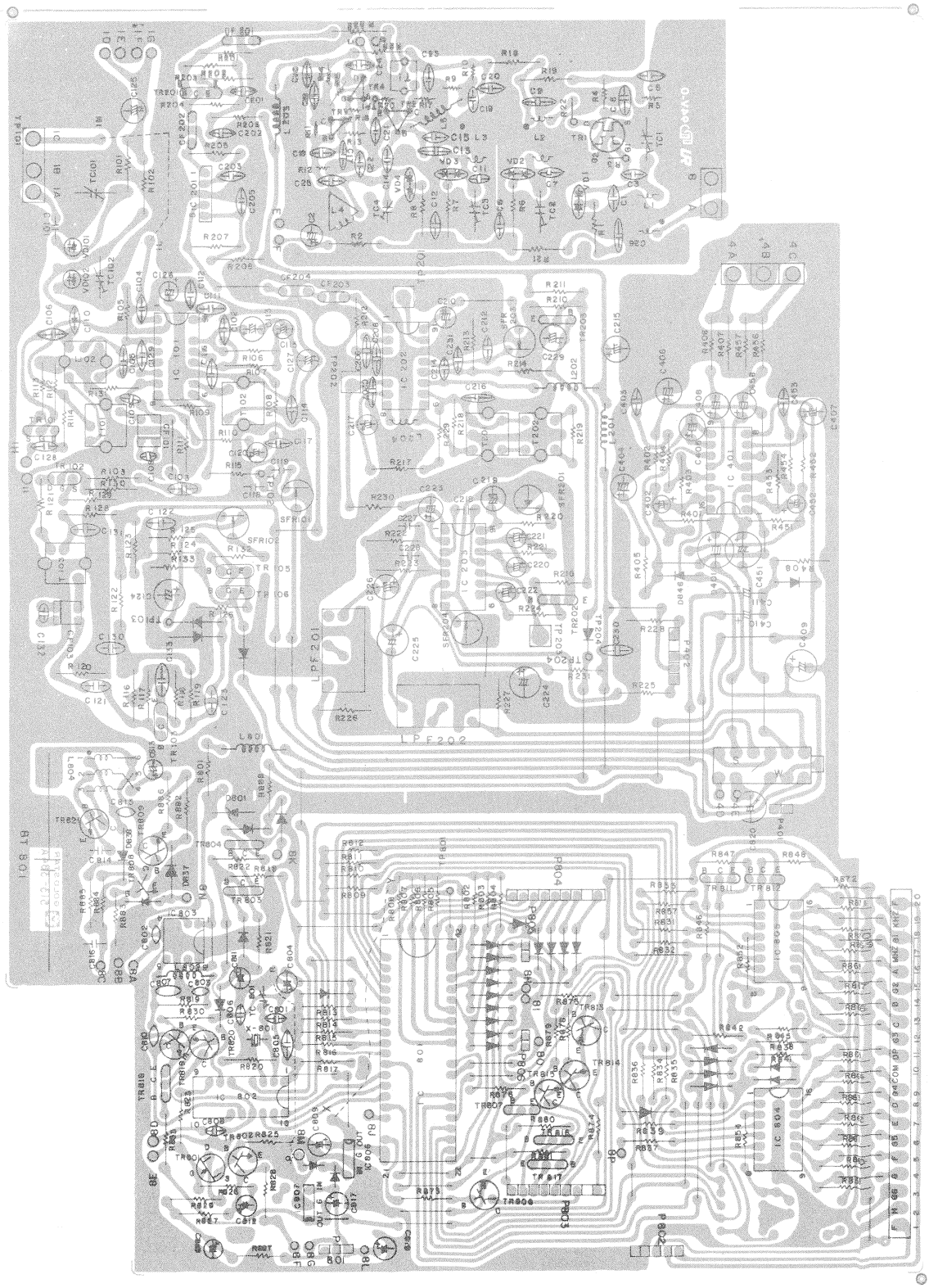
4) FM ADJUSTMENT CHART

BAND	STEP	INSTRUMENT & FREQUENCY	TEST POINT	RADIO DIAL SETTING	ADJUSTMENT	REMARKS
IF	1	GENESCOPE 10.7 MHz	GENESCOPE output : R20 input : TP202	TUNING GANG FULLY CLOCKWISE HIGHEST FREQUENCY		DETUNE
					T1, T201	SYMMETRICAL "S" CURVE CENTERED AT 10.7 MHz
					T202	"S" CURVE LINEARITY
COVER RANGE	2	SIGNAL GENERATOR 87.5 MHz	4A, 4C (R407, R457)	TUNING GANG FULLY COUNTER CLOCKWISE LOWEST FREQUENCY	L4	ADJUST FOR MAXIMUM INDICATION
	3	SIGNAL GENERATOR 108 MHz	4A, 4C (407, R457)	TUNING GANG FULLY CLOCKWISE HIGHEST FREQUENCY	TC4	ADJUST FOR MAXIMUM INDICATION
	4	REPEAT STEPS 2 AND 3 AS REQUIRED				
TRACKING	5	SIGNAL GENERATOR 90 MHz	4A, 4C (R407, R457)	TUNE TO SIGNAL	L1, L2, L3	ADJUST FOR MAXIMUM INDICATION
	6	SIGNAL GENERATOR 106 MHz	4A, 4C (R407, R457)	TUNE TO SIGNAL	TC1, TC2, TC3	ADJUST FOR MAXIMUM INDICATION
	7	REPEAT STEPS 5 AND 6 AS REQUIRED				

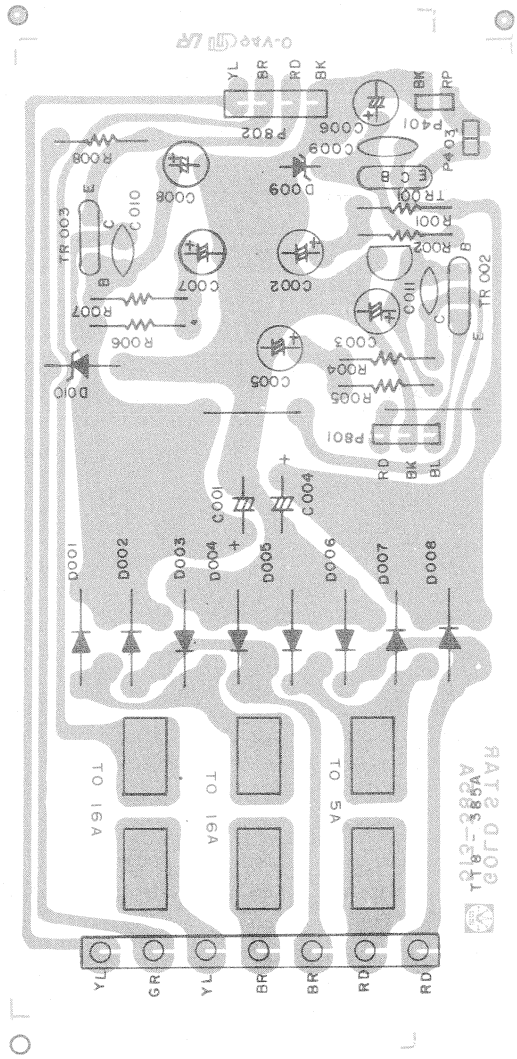
5) FM SEARCH STOP LEVEL & MPX ADJUSTMENT CHART

BAND	STEP	INSTRUMENT & FREQUENCY	TEST POINT	RADIO DIAL SETTING	ADJUSTMENT	REMARKS
SEARCH STOP LEVEL	1	SIGNAL GENERATOR 98 MHz input: 15uV	DC VOLTMETER TP204 (D844 or D845)	TUNE TO SIGNAL	SFR203	ADJUST FOR 4-4.5V
DISTORTION	2	SIGNAL GENERATOR 98 MHz input: 1mV	DC MILLI VOLTMETER across R217	"	T201	ADJUST FOR ZERO VOLT
			DISTORTION METER 4A, 4C (R407, R457)	"	T202	ADJUST FOR MINIMUM DISTORTION
MPX	3		FREQ. COUNTER TP203 (IC203 pin 12)	NO INPUT SIGNAL	SFR201	ADJUST FOR FREQUENCY 19 kHz
	4	FM STEREO S.G. 98 MHz input: 1mV	4A, 4C (R407, R457)	TUNE TO SIGNAL	SFR204	ADJUST FOR OTHER CHANNEL MIN.

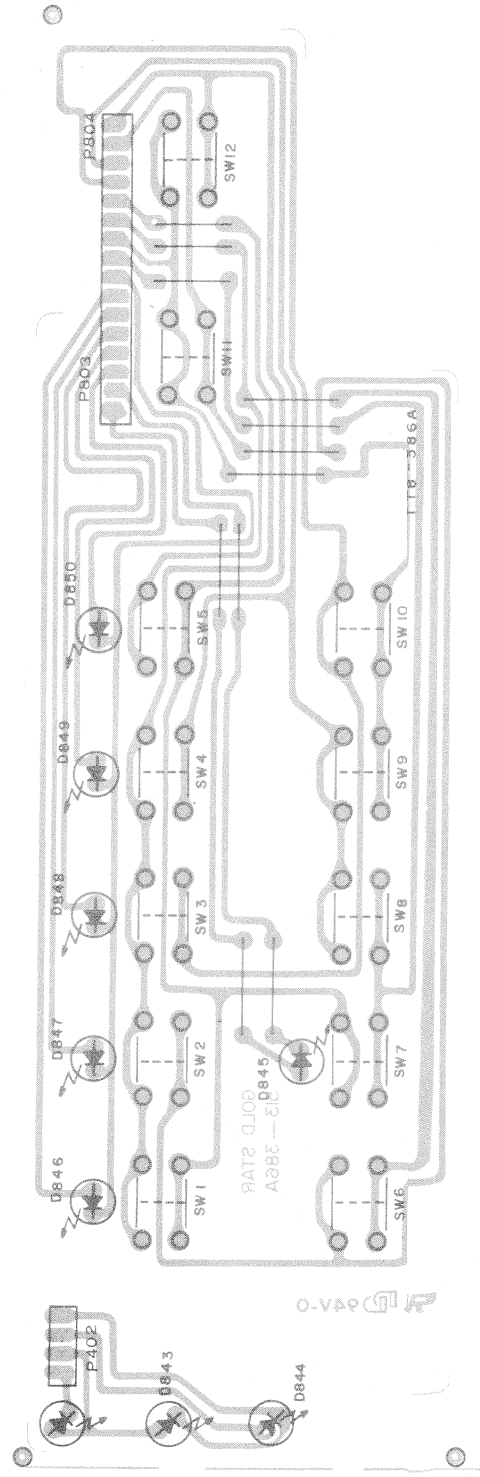
PWB AY, MAIN (511-384B)



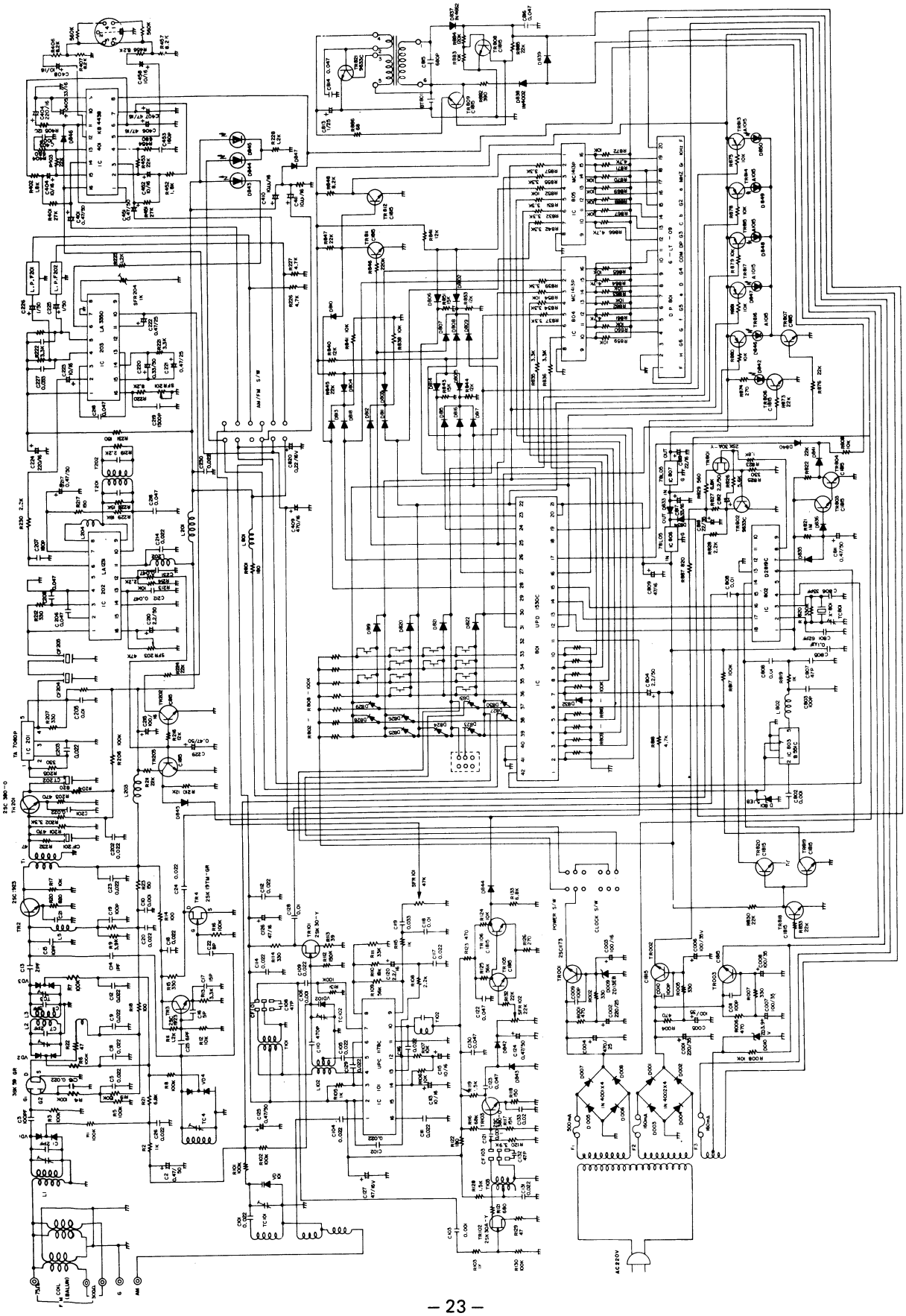
PWB AY, POWER SOURCE (511-385A)



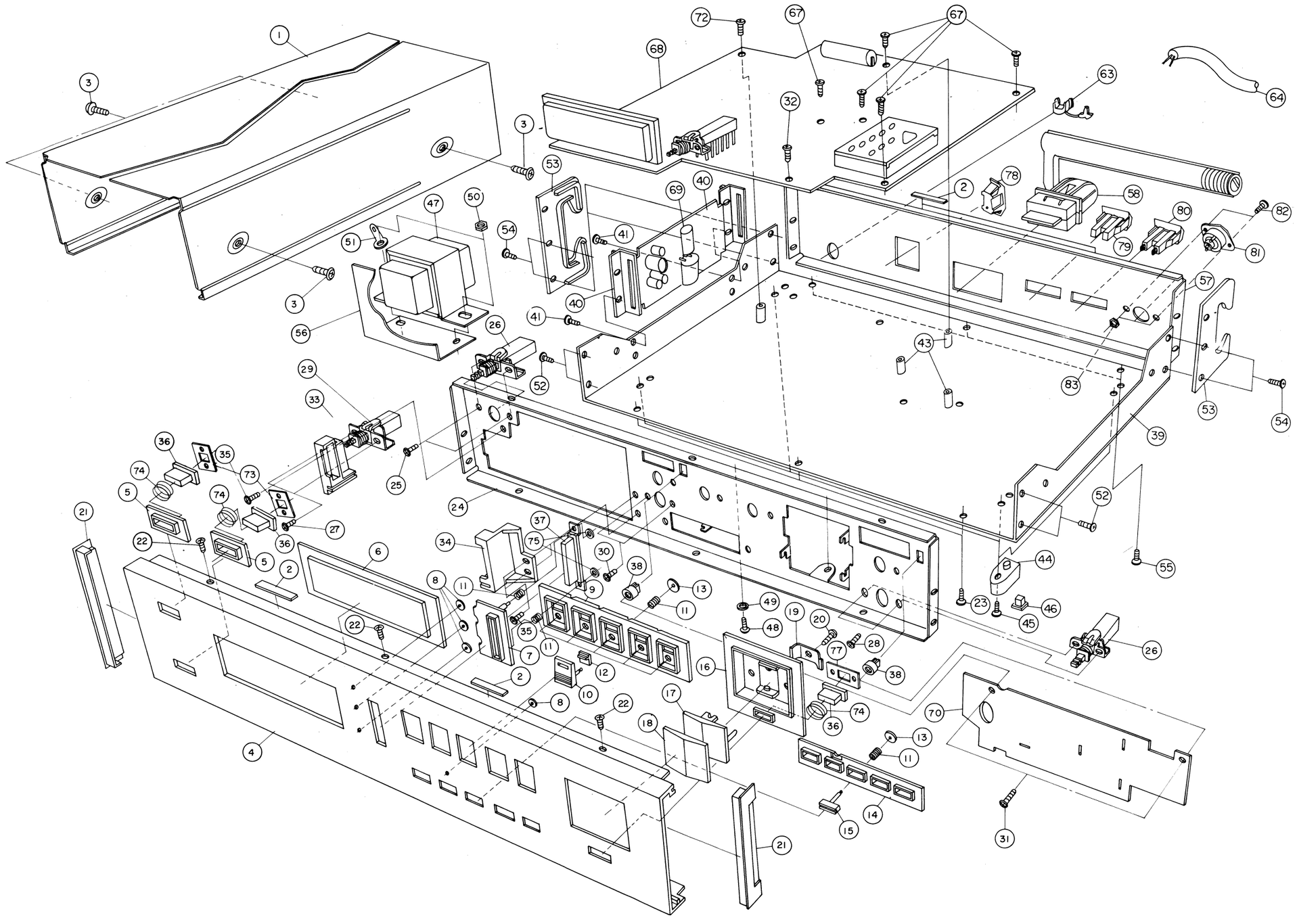
PWB AY, SWITCH (511-386A)



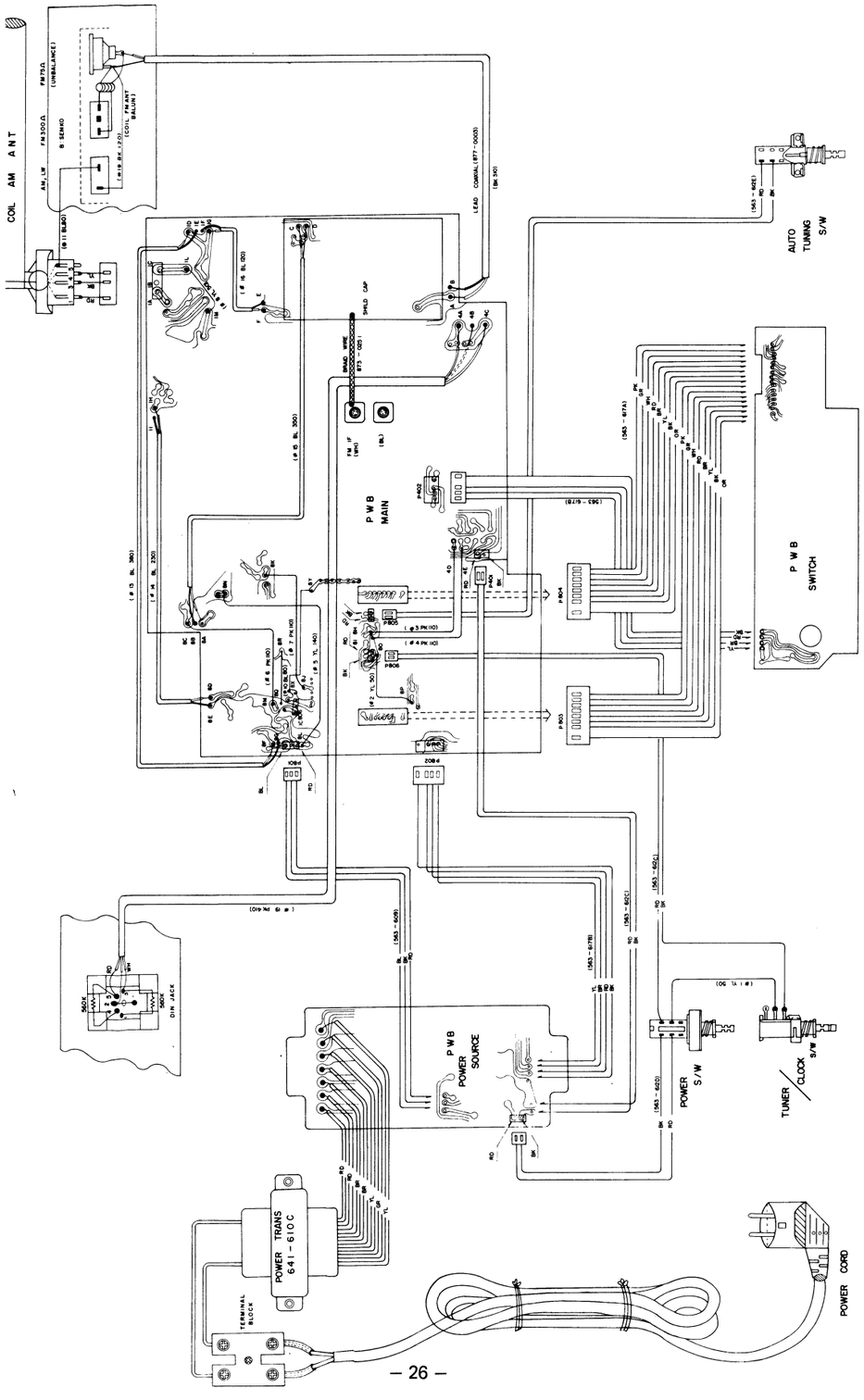
SCHEMATIC DIAGRAM



EXPLODED VIEW



WIRING DIAGRAM



MECHANICAL PARTS LIST

NO.	PART NO.	DESCRIPTION
1	213-178B	CABINET
2	472-604A	FELT
3	353-604B	SCREW SPECIAL
4	258-304B	PANEL FRONT
5	341-121A	BUSHING PUSH KNOB
6	236-115B	WINDOW
7	341-122A	BUSHING AM FM KNOB
8	463-003A	LENS. L.E.D.
9	341-119A	BUSHING MEMORY KNOB
10	273-236A	KNOB. MEMORY
11	442-634D	SPRING. KNOB
12	463-001A	LENS. MEMORY KNOB
13	354-602J	WASHER. NONMETAL
14	341-123A	BUSHING. KEY S/W KNOB
15	273-237A	KNOB. KEY SWITCH
16	341-120A	BUSHING TUNING KNOB
17	271-138A	KNOB. TUNING
18	276-031A	CAP. TUNING KNOB
19	442-195A	SPRING. PLATE
20	TRQ1830J	SCREW. TRQ 2 + 3 x6 FZMY
21	221-354A	COVER SIDE
22	TCQ1836J	SCREW TCQ 3 x 8 FZMY
23	TRR1836J	SCREW TRR 3 + 3 x 8 FZMY
24	313-154A	CHASSIS FRONT
25	MRC1830J	SCREW MRC 3 x 6 FZMY
26	554-606B	S/W. UNIPUSH
27	MRC1830J	SCREW MRC 3 x 6 FZMY
28	MRC1830J	SCREW MRC 3 x 6 FZMY
29	554-606E	S/W. UNIPUSH
30	MRC1830J	SCREW MRC 3 x 6 FZMY
31	TRQ1841J	SCREW TRQ 2 + 3 x 12 FZMY
32	TRR1830J	SCREW TRR 3 + 3 x 6 FZMY
33	321-298A	BRACKET DIGITRON L
34	321-300A	BRACKET DIGITRON R
35	TRR1836J	SCREW TRR 3 x 8 FZMY
36	273-238A	KNOB. PUSH
37	273-239A	KNOB. AM. FM
38	324-368A	HOLDER. PWB
39	313-156B	CHASSIS. MAIN
40	321-301A	BRACKET PWB

NO.	PART NO.	DESCRIPTION
41	TRR1822J	SCREW TRR 3 x 4 FZMY
42		
43	322-605A	SUPPORTER PWB
44	264-004A	LEG
45	TRR1836J	SCREW TRR 3 x 8 FZMY
46	477-013A	RUBBER LEG
47	641-610C	TRANS POWER
48	MRC1836J	SCREW MRC 3 x 8 FZMY
49	WSB1800D	WASHER SPRING
50	NHA1800J	NUT NHAI-3 FZMY
51	562-009A	BS LUG
52	TRR1830J	SCREW TRR 3 x 6 FZMY
53	445-052A	SPACER
54	TCQ1836J	SCREW TCQ 3 x 8 FZMY
55	TRR1830J	SCREW TRR 3 x 6 FZMY
56	221-355A	COVER SHIELD
57	258-635B	PANEL BACK
58	632-612A	COIL, ANT EXT BAR MW
59	573-047A	SOCKET
60	TRQ1836I	SCREW
61	552-050A	SLIDE SWITCH
62	MRC1822I	SCREW MRC 3 x 4 FBK
63	324-348A	HOLDER, CORD HEYCO
64	681-003D	CORD. POWER
65	563-014A	TERMINAL
66	TRQ1836I	SCREW
67	353-027H	SPECIAL SCREW
68	511-138A	PWB. AY MAIN
69	511-385A	PWB AY POWER SOURCE
70	511-386A	PWB AY SWITCH
71	334-007A	STOPPER. SWITCH
72	MRC 1830J	SCREW MRC 3 x 6 FZMY
73	442,634E	SPRING COIL
74	384-043A	GUIDE KNOB
75	WPL1500J	WASHER WPL-2.6
76	354-602A	WASHER NON METAL
77	384-044A	GUIDE KNOB. B
78	573-606A	SOCKET, DIN 5P
79	573-035A	SOCKET, ANT AM
80	573-032A	SOCKET, ANT FM
81	573-026A	SOCKET, ANT FM
82	MRC1836I	SCREW, MRC+3 8 FBK
83	NHA1800J	NUT, NH1-3 FZMY

ELECTRICAL PARTS LIST

NO.	SYMBOL NO.	PART NO.	DESCRIPTION
1	IC801	668-039A	IC, UPD1530C (U-COM)
2	IC802	668-040A	IC, UPD2819C (PLL)
3	IC803	668-041A	IC, UPB551C (Pre-scalar)
4	IC804, 805	668-042A	IC, MC1413P (TR ARRAY)
5	IC806, 807	668-044A	IC, UPC78L05 (Regulator)
6	IC201	668-024A	Integrated, Circuit, TA7060P
7	IC202	668-052A	IC LA1231 (FM, IF)
8	IC203	668-025A	Integrated Circuit LA3350 (MPX)
9	IC101	668-043A	IC UPC1178C (AM RF, IF)
10	IC401	668-038A	IC KB4438 (Muting)
11	DP801	659-001A	Display, Fluorescent 6-LT-09
12	TR1	667-008B	FET 3SK-59GR
13	TR4	667-012A	FET 2SK 19 TM-GR TOSHIBA
14	TR101, 102, 801	667-010C	FET, 2SK30A-Y TOSHIBA
15	TR2, 3	665-819B	TR TOSHIBA, 2SC-1923-0
16	TR103, 201	665-820B	TR TOSHIBA 2SC-380TM-0
17	TR105, 106, 202, 203, 803, 804, 806	665-812C	TR TOSHIBA 2SC 1815-GR
	TR807, 808, 809, 811 812, 818, 819, 820	665-812C	TR TOSHIBA 2SC 1815-GR
18	TR813, 814, 815, 816 817	665-813C	TR TOSHIBA 2SC 1015-GR
19		665-813B	TR TOSHIBA 2SA1015-Y
20	TR802	662-026C	TR MOTOROLA MPS9633C
21	VD1, 2, 3, 4	654-412B	Diode AFC MV104G
22	VD101, 102	654-417C	Diode AFC MVAM125 MOTOROLA
23	D801	654-608C	Diode Zener ZPD 5.1 ITT
24	D810-13, 818-33, 35, 36, 840-48	652-603A	Diode Switching IS 2472R-OHM
25	D837, 838	652-005B	Diode Rectifier IN4002
26	X801	618-001A	CRYSTAL UNIT 5.760 MHz
27	CF201, 202, 203, 204	616-007A	Filter, Ceramic SFE107MA8 RD
28	CF101	616-002B	Filter Ceramic SFZ, 460 A3L
29	CF103	616-002C	Filter Ceramic SFZ 460 C_3
30	TC1, 2, 3, 101, 102	623-025A	TRIMMER, CTY-112B
31	TC4, 801	623-024C	TRIMMER
32	LPF201, 202	639-606A	LOW PASS Filter
33	L1	635-607H	Coil FM RF (Bobbin)
34	L2	635-607I	Coil FM RF (Bobbin)
35	L3	635-607J	Coil FM RF (Bobbin)

NO.	SYMBOL NO.	PART NO.	DESCRIPTION
36	L4	635-607K	Coil FM RF (Bobbin)
37	L5, 201, 202, 203, 801 802	636-602B	Coil CHOKE
38	L204	636-607A	Coil CHOKE
39	T1	644-610A	Coil FM IFT
40	T201	647-604A	Coil FM Discriminator
41	T202	647-604B	Coil FM Discriminator
42	L102	634-602E	Coil OSC AM 150μH
43	T101, 103	644-609C	Coil MW IFT (Double Tuning)
44	T102	644-601B	Coil MW IFT
45	SFR204	613-002A	VR SEMI-FIXD SR19R-1KB 10D
46	SFR201	613-002C	VR SEMI-FIXD SR19R-4.7KB 10D
47	SFR203	613-002F	VR SEMI-FIXD SR19R-10KB 10D
48	SFR102	613-002D	VR SEMI-FIXD SR19R-22KB 10D
49	SFR101	613-002G	VR SEMI-FIXD SR19R-47KB 10D
50		573-064A	Socket AY IC 42P
51		573-063A	Socket IC 18P
52		874-0005	Wire Copper Tin-COATED 0.8TA
53		561-005E	CONNECTOR MALE(8P)
54		561-005F	CONNECTOR MALE (4P)
55		561-009C	CONNCETOR MALE
56		561-009B	CONNECTOR MALE
57		564-018E	PLUG (MULTI-PRONG)
58		561-010B	CONNECTOR MALE MOLEX 3055-3A
59		276-042A	Cap Shield
60		276-043A	Cap Shield
61		221-363A	Cover Shield
62		384-035A	Guide Shield
63		554-606A	SW, UNI Push SUF 12 SR Shorting
64	BT801	534-003A	Battery Nicad
65	L804	646-006A	Trans Toroid
66		564-022A	Plug AY. 12 Pin
67		221-365A	Cover Plate
68		472-607A	FELT Fiber
69	C820	CE224F01	C, Electrolytic 0.22MF-50V
70	C221, 222	CE474F01	" 0.47MF-50V
71	C224, 404	CE227C01	" 220MF-16V
72	C215	CE107C01	" 100MF-16V
73	C126, 127, 406 407, 809	CE476C09	" 47MF-16V
74	C220, 811	CE334F01	" 0.33MF-50V

NO.	SYMBOL NO.	PART NO.	DESCRIPTION
75	C405, 817	CE336C01	C, Electrolytic 33MF-16V
76	C113, 115, 402, 408 452, 458, 223	CE106C01	" 10MF-16V
77	C120, 210, 804, 812	CE225F01	" 2.2MF-50V
78	C225, 226, 813	CE105F01	" 1MF-50V
79	C2, 124, 125, 217, 229 401, 451	CE474F01	" 0.47MF-50V
80	C819, 821	CE226C01	" 22MF-16V
81	C410, 411	CE106C01	" 10MF-16V
82	C818	CE226E01	" 22MF-35V
83	C409	CE477C01	" 470MF-16V
84	C110	CY471J01	C. Polystyrol 470PF-JR
85	C219	CY152J01	" 1500PF-JR
86	C815	CY681J01	" 680PF-JR
87	C101, 133, 814, 816	CQ223M01	C. Polyester 0.022MF-M 50V
88	C119, 227, 228	CQ333M01	" 0.033MF-M 50V
89	C218	CQ473M01	" 0.047MF-M 50V
90	C118	CQ103M01	" 0.01MF-M 50V
91	C14	CC010C06	C. Ceramic CC 1pF-C CK 50V
92	C13, 7	CC020C01	" CC 2pF-C SL 50V
93	C16	CC050C01	" CC 5pF-C SL 50V
94	C1	CC020C06	" CC 2pF-C CH 50V
95	C22	CC080C01	" CC 8pF-C SL 50V
96	C11	CC050C06	" CC 5pF-C CH 50V
97	C15	CC100C01	" CC 10pF-C SL 50V
98	C17	CC150J01	" CC 15pF-J SL 50V
99	C25	CC060C01	" CC 6pF-C SL 50V
100	C806	CC300J01	" CC 30pF-J
101	C108, 132, 807	CC470J01	" CC 47pF-J SL 50V
102	C3, 19, 403, 453, 803	CC101J01	" CC 100pF-J SL 50V
103	C207	CC181J01	" CC 180pF-J SL 50V
104	C10, 103, 106, 121, 802	CK102Z02	C. Ceramic CK 0.001MF-Z 50V
105	C128, 205, 808, 810	CK103Z02	C. Ceramic CK 0.01MF-Z 50V
106	C5, 6, 9, 12, 20, 21, 23 24, 26, 8, 18, 131, 102 104, 105, 109, 111, 112 114, 201, 202, 203, 116 117, 129, 214, 230	CK223Z02	C. Ceramic CK 0.022MF-Z 50V
107	C206, 208, 212, 216 231, 122, 123, 130	CK473Z02	C. Ceramic CK 0.047MF-Z 50V
108	C805	CK473Z02	C. Ceramic CK 0.047MF-Z 50V
109	C801	CC620J06	C. Ceramic CC 62pF
110	R113	RD390J09	R. Carbon Film 39-J¼WM

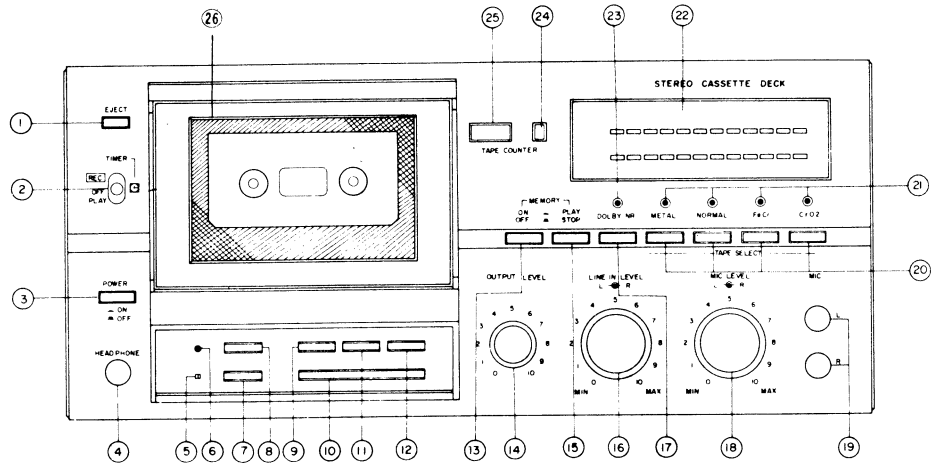
NO.	SYMBOL NO.	PART NO.	DESCRIPTION
111	R14	RD101J02	R. Carbon FiLM 100-J¼WR
112	R18, 208, 206	RD101J09	" 100-J¼WM
113	R874	RD271J09	" 270-J¼WM
114	R886	RD470J09	" 47-J¼WM
115	R15	RD331J02	" 330-J¼WR
116	R205, 207, 212, 114 825	RD331J09	" 330-J¼WM
117	R882	RS391K05	R Metal OXIDE 390-K 1WP
118	R123, 201, 203	RD471J09	R CARBON FILM 470-J¼WM
119	R829	RD561J09	" 560-J¼WM
120	R121, 404, 454	RD681J09	" 680-J¼WM
121	R204, 887, 20	RD821J09	" 820-J¼WM
122	R2, 103, 105, 819	RD102J09	" 1K-J¼WM
123	R11	RD122J02	" 1.2K-J¼WR
124	R225, 228	RD122J09	" 1.2K-J¼WM
125	R119, 128	RD152J09	" 1.5K-J¼WM
126	R402, 452, 823	RD182J09	" 1.8K-J¼WM
127	R214, 108, 828, 219 230	RD222J09	" 2.2K-J¼WM
128	R13	RD332J02	" 3.3K-J¼WR
129	R202, 221, 222, 223. 831, 832, 834, 835, 836, 852, 854	RD332J09	" 3.3K-J¼WM
130	R9	RD392J02	" 3.9K-J¼WR
131	R226, 227, 818, 838, 861, 864, 866, 871, 841,	RD472J09	" 4.7K-J¼WM[
132	R120	RD392J09	" 3.9K-J¼WM
133	R826	RD562J09	" 5.6K-J¼WM
134	R133, 21, 827	RD682J09	" 6.8K-J¼WM
135	R220, 406, 456, 407, 457, 848	RD822J09	" 8.2K-J¼WM
136	R12, 17	RD103J02	" 10K-J¼WR
137	R106, 107, 859, 863, 867	RD103J09	" 10K-J¼WM
138	R868, 869, 870, 872, 213	RD103J09	" 10K-J¼WM
139	R888, 875, 878, 879, 860, 862	RD103J09	" 10K-J¼WM
140	R865, 880, 881, 883, 124, 233	RD103J09	" 10K-J¼WM
141	R210, 216, 845	RD123J09	" 12K-J¼WM
142	R117, 218	RD153J09	" 15K-J¼WM
143	R110, 229	RD183J09	" 18K-J¼WM
144	R10	RD223J02	" 22K-J¼WR

NO.	SYMBOL NO.	PART NO.	DESCRIPTION
145	R211, 224, 403, 408 453, 132, 822, 847, 830, 873, 876, 885, 833	RD223J09	" 22K-J¼WM
146	R837, 839, 842, 855, 857	RD332J09	R. CARBON FILM 3.3K-J¼WM
147	R3, 4, 5, 16	RD104J02	" 100K-J¼WR
148	R1, 6, 7, 8, 101, 102 802, 803, 804	RD104J09	" 100K-J¼WM
149	R805, 806, 807, 808, 809, 810, 811, 131	RD104J09	" 100K-J¼WM
150	R812, 813, 814, 815, 816, 817, 130, 234	RD104J09	" 100K-J¼WM
151	R122	RD181J09	" 180K-J¼WM
152		RD682J09	" 6.8K-J¼WM
153	R19, 112	RD154J09	" 150K-J¼WM
154	R401, 451	RD273J09	" 27K-J¼WM
155	R115	RD102J01	" 1K-J¼WM
156	R109, 125	RD563J09	" 56K-J¼WM
157	R111	RD333J09	" 33K-J¼WM
158	R116	RD683J09	" 68K-J¼WM
159	R820	RD334J09	" 330K-J¼WM
160	R821, 134	RD105J09	" 1M-J¼WM
161	R884	RD124J09	" 120K-J¼WM
162	R846	RD224J09	" 220K-J¼WM
163		RD821J09	" 820K-J¼WM
164	R405	RD121J09	" 120K-J¼WM
165	R129, 232	RD470J09	" 47-J¼WM
166	R22	RD470J09	" 47-J¼WM
167	R23, 118, 231	RD151J09	" 150-J¼WM
168	R217	RD151J01	" 150-J¼WM
169		586-101A	Fuse Holder KS Clip Type 5 x 20
170	F1	585-205C	Fuse 5 x 20 KS 250V 500MA
171	F2, 3	585-201C	Fuse 5 x 20 KS 250V 160MA
172	D001, 002, 003, 004	652-005B	Diode Rectifier 1N4002
173	D005, 006, 007, 008	652-005A	Diode Rectifier 1N 4001
174	TR001	664-414B	TR TOSHIBA 2SC 1173-O
175	TR002	665-812C	TR TOSHIBA 2SC 1815-GR
176	D009	654-411B	Diode Zener RD13EB
177	D010	654-608A	Diode Zener ZPD3.9 ITT
178		561-009B	CONNECTOR MALE
179		563-612C	" AY (2P)
180		561-606E	" AY JST
181		563-609C	" AY (3P)
182		561-606O	" AY JST

NO.	SYMBOL NO.	PART NO.	DESCRIPTION
183		563-617B	CONNECTOR AY (4P)
184	C004	CE477D01	C. ELECTROLYTIC 470MF-25V
185	C001	CE227E01	" 220MF-35V
186	C002	CE227D01	" 220MF-25V
187	C005, 006, 007, 008	CE107E01	" 100MF-35V
188	C003	CE107C01	" 100MF-16V
189	C009, 010, 011	CC101J01	C. CERAMIC CC 100pF-J SL 50V
190	R001, 006, 004	RD471J09	R. CARBON FILM 470-J¼WM
191	R002, 005, 007	RD331J09	" 330-J¼WM
192	R003	RD822J09	" 8.2K-J¼WM
193		558-001A	SW SOFT TOUCH
194		653-022A	SED, TLR-114
195		653-023A	LED, TLG-114
196		563-617A	CONNECTOR AY (8P)
197		563-617B	" (4P)
198	D839	652-005A	DIODE, RECTIFIER 1N4001
199	D803, 804, 834	651-605A	DIODE, AM DET. 1N34A
200	TR821	662N033C	TR, MOTOROLA MPS9411A-I
201	TR003	664-016B	TR, TOSHIBA 2C1160-O
202	R801	RD181J03	R, CARBON FILM 180-J½WP
203	R889	RD563J02	R, CARBON FILM 56K-J¼WR

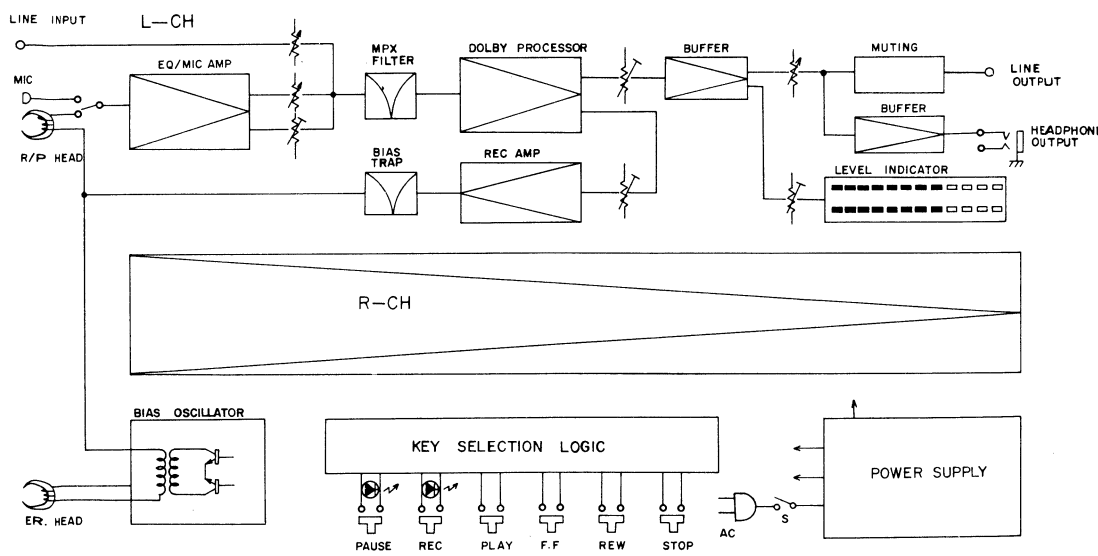
GSK-1100

CONTROLS



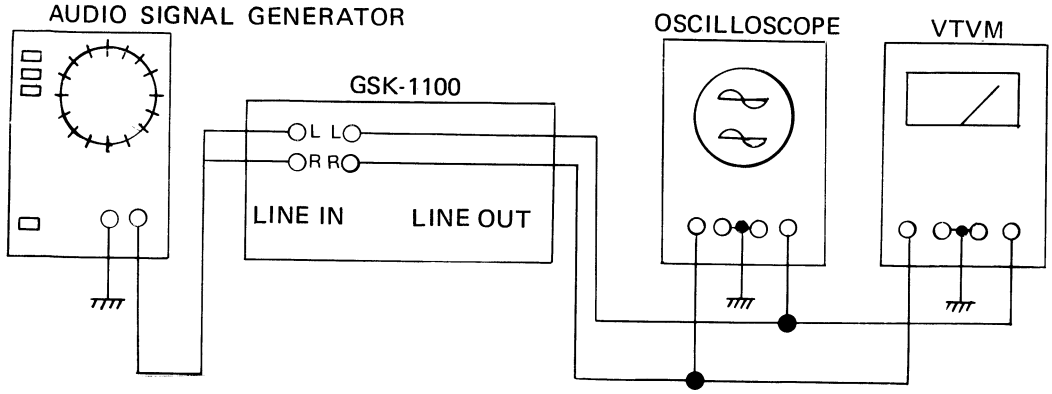
1. Eject Button
2. Timer Rec and Play Switch
3. Power Switch
4. Headphone Jack
5. Pause Indicator
6. Recording Indicator
7. Pause Button
8. Rec Button
9. Rewind Button
10. Stop Button
11. Play Button
12. F.F. Button
13. Memory ON/OFF Button
14. Output Level Knob
15. Memory Play/Stop Button
16. Line in Level Control Knob
17. Dolby NR Button
18. MIC Input Level Control Knob
19. MIC Jacks
20. Tape Select Button
21. Tape Indicator LED
22. Led Peak Level Meter
23. Dolby NR Indicator
24. Counter Reset Button
25. Tape Counter
26. Cassette Tape Holder

BLOCK DIAGRAM



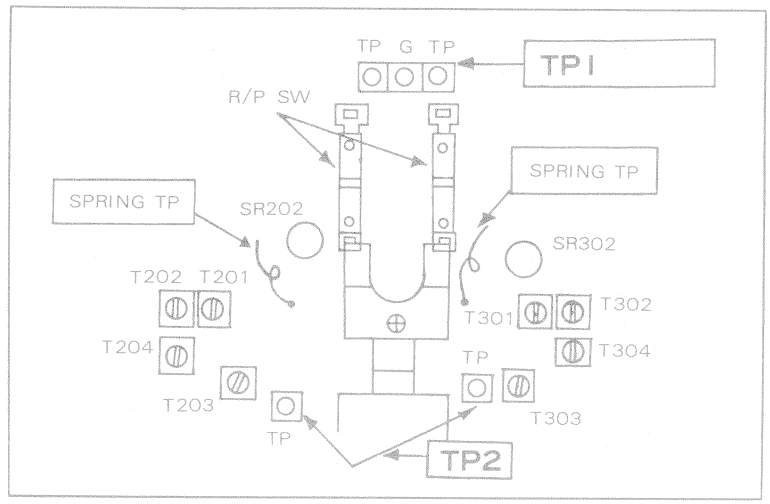
ALIGNMENT PROCEDURE

1) CONNECTION



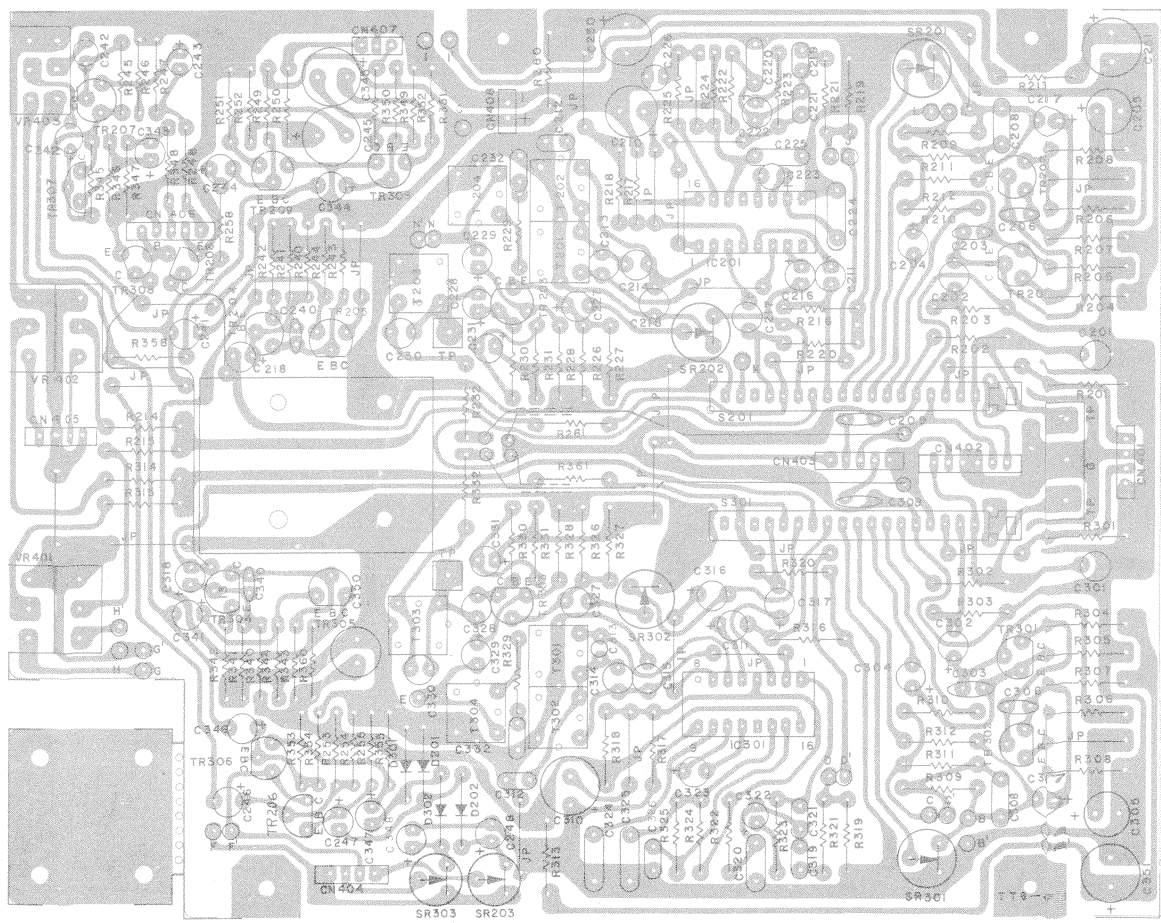
2) CASSETTE ADJUSTMENT CHART

STEP	ITEM	TEST POINT & TEST EQUIPMENT	TEST TAPE	ADJUSTMENT	REMARK
1	AZIMUTH	VTVM & SCOPE: LINE OUT	MTT – 114	R/P HEAD SCREW	ADJUST FOR MAXIMUM INDICATION AND MINIMUM L/R DIFFERENCE
2	P.B. OUTPUT	VTVM & SCOPE: LINE OUT	MTT – 150	SR201 (L), 301 (R)	ADJUST P.B. OUTPUT VOLTAGE FOR 1V AT MAXIMUM LEVEL VOLUME
3	METER LEVEL	VTVM & SCOPE: LINE OUT	MTT – 150	SR203 (L), 303 (R)	ADJUST FOR LEVEL METER SCALE "DD" MARK INDICATE AT "STEP 2" CONDITION
4	19 KHZ TRAP	19 KHZ OSCILLATOR: LINE IN VTVM & SCOPE: TP2 (REFER TO FIG.)		T202, 302	ADJUST FOR MINIMUM 19 KHZ OUTPUT AT RECORD MODE
5	BIAS TRAP-1	VTVM & SCOPE: SPRING TP (REFER TO FIG.)		T201, 301	ADJUST FOR MINIMUM BIAS LEAKAGE OUTPUT AT RECORD MODE
6	BIAS TRAP-2	VTVM & SCOPE: TP2 (REFER TO FIG.)		T203, 303	ADJUST FOR MINIMUM BIAS LEAKAGE OUTPUT AT RECORD MODE
7	PEAKING	15 KHZ OSCILLATOR: LINE IN VTVM & SCOPE: LINE OUT		T204, 304	ADJUST FOR MAXIMUM OUTPUT AT RECORD MODE
8	REC BIAS (TAPE SEL : NORMAL)	VTVM & SCOPE: TP1 (REFER TO FIG.)		SR401, 402	ADJUST FOR 4mV AT RECORD MODE
9	REC LEVEL	1 KHZ OSCILLATOR: LINE IN VTVM & SCOPE: TP1 (REFER TO FIG.)		SR202, 302	1. ADJUST LINE IN VOLUME SO THAT LED LEVEL METER COMES TO DOLBY LEVEL ("DD" MARK) 2. PUT OFF CN412 TO STOP BIAS OSCILLATION 3. ADJUST SR202 AND SR302 SO THAT OUTPUT VOLTAGE AT TP1 SHOULD BE 480mV

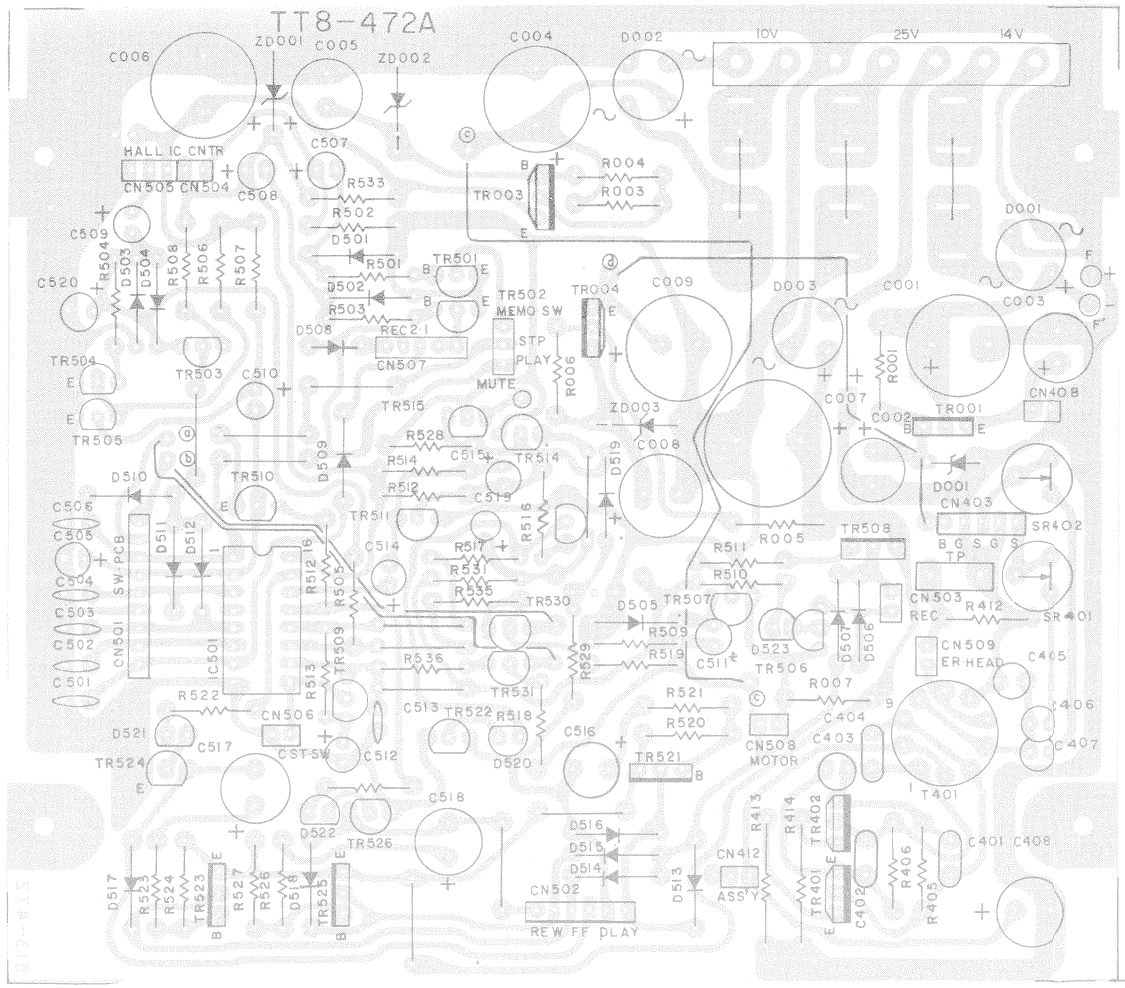


PWB ASSEMBLY

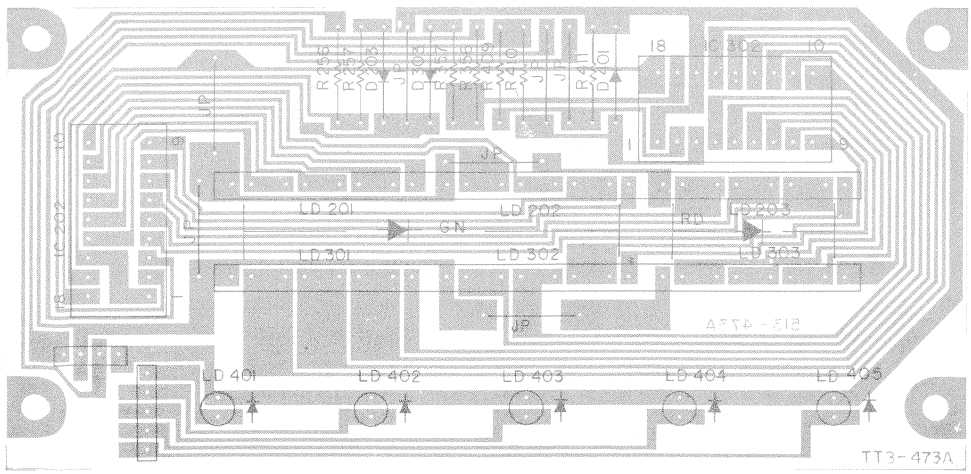
PWB AY, MAIN (511-471A)



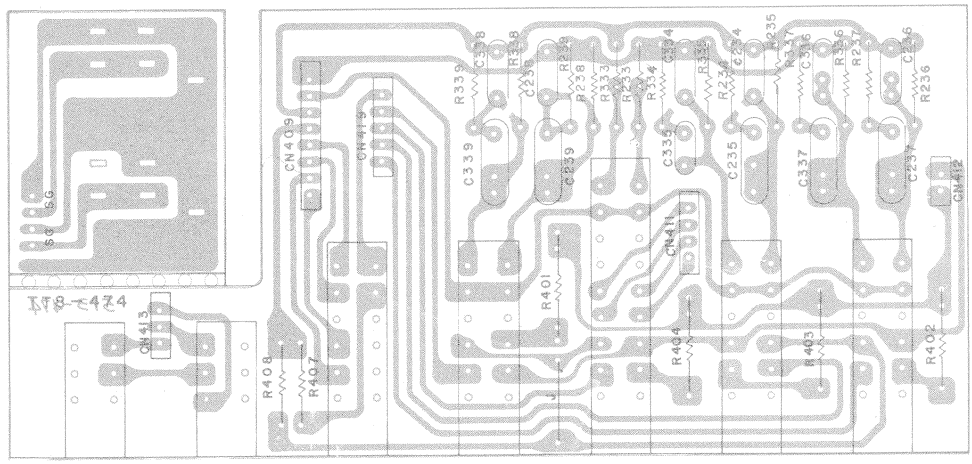
PWB AY, LOGIC (511-472A)



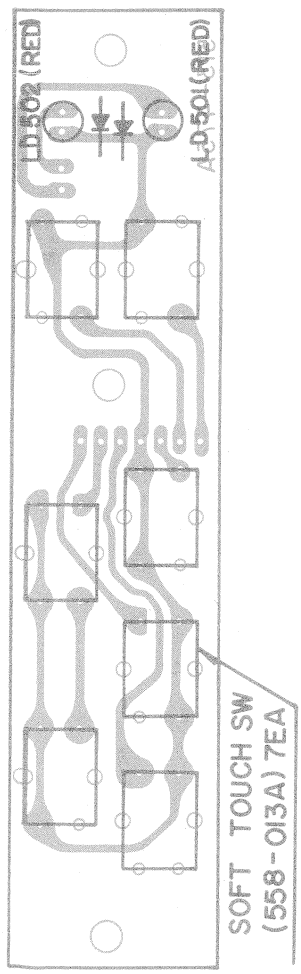
PWB AY, PEAK LEVEL (511-473A)



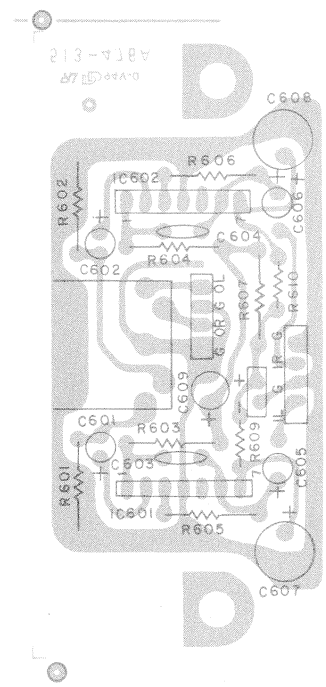
PWB AY, SWITCH (511-474A)



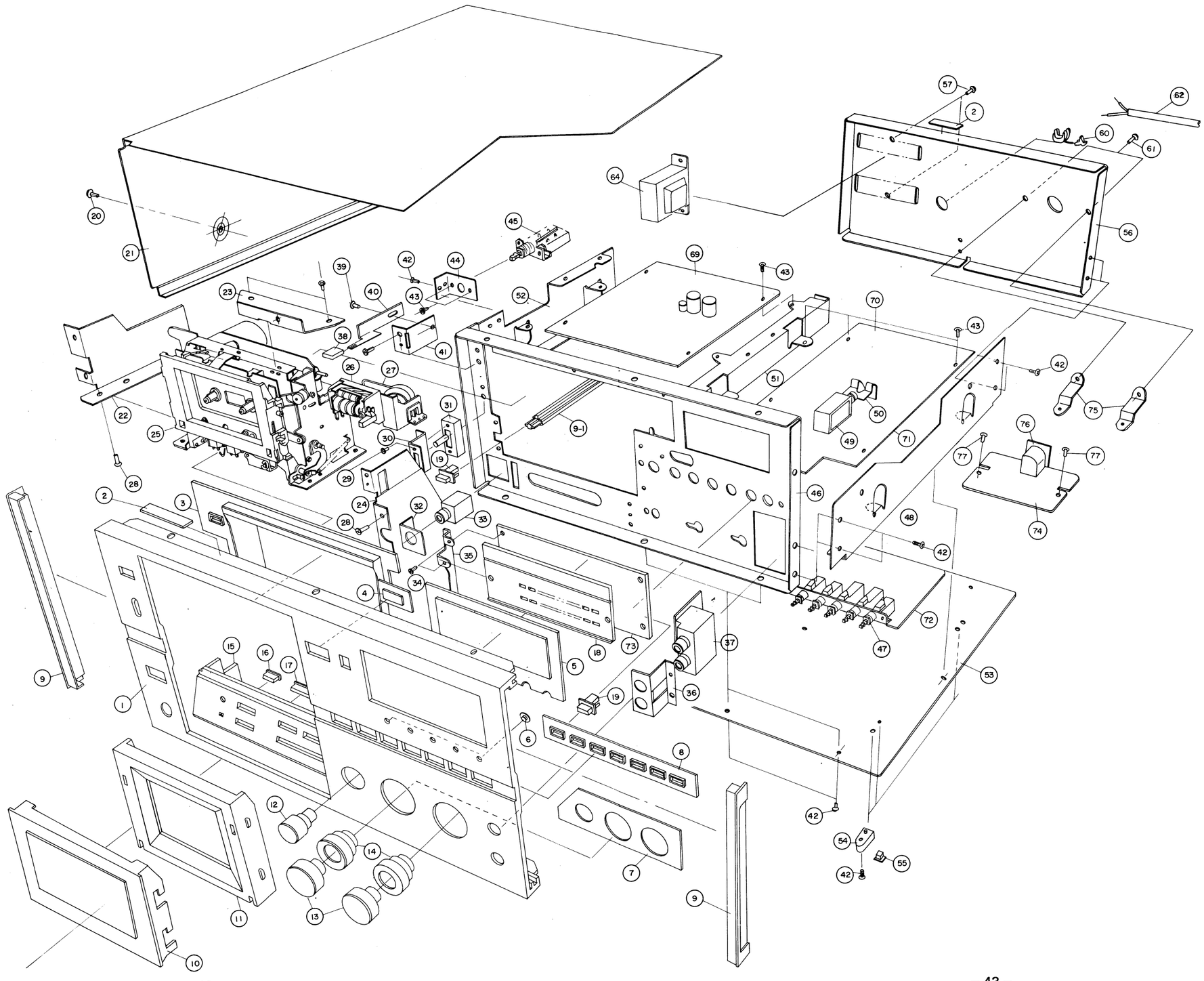
PWB AY, SOFT TOUCH (511-475A)



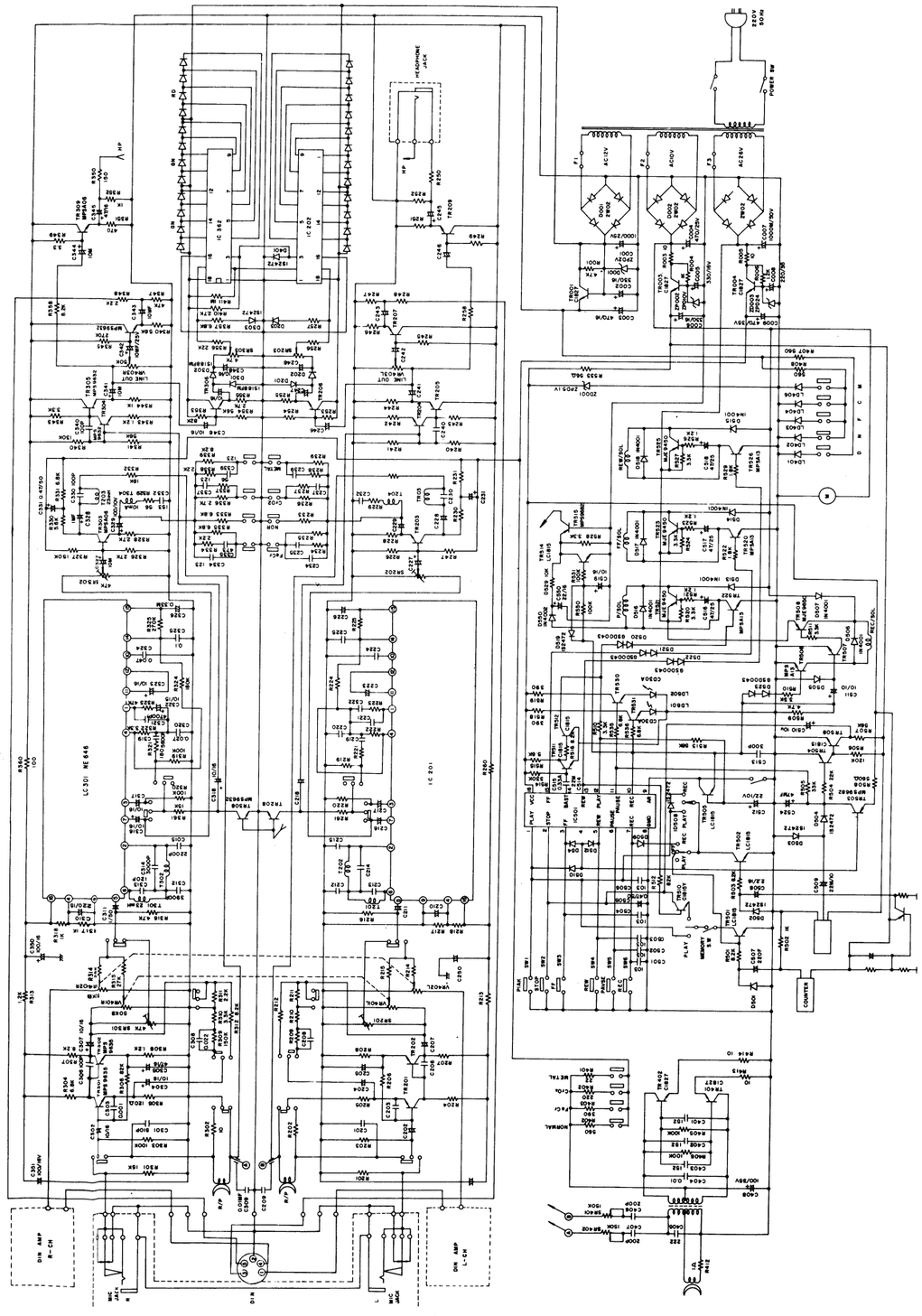
PWB AY, NETWORK (511-476A)



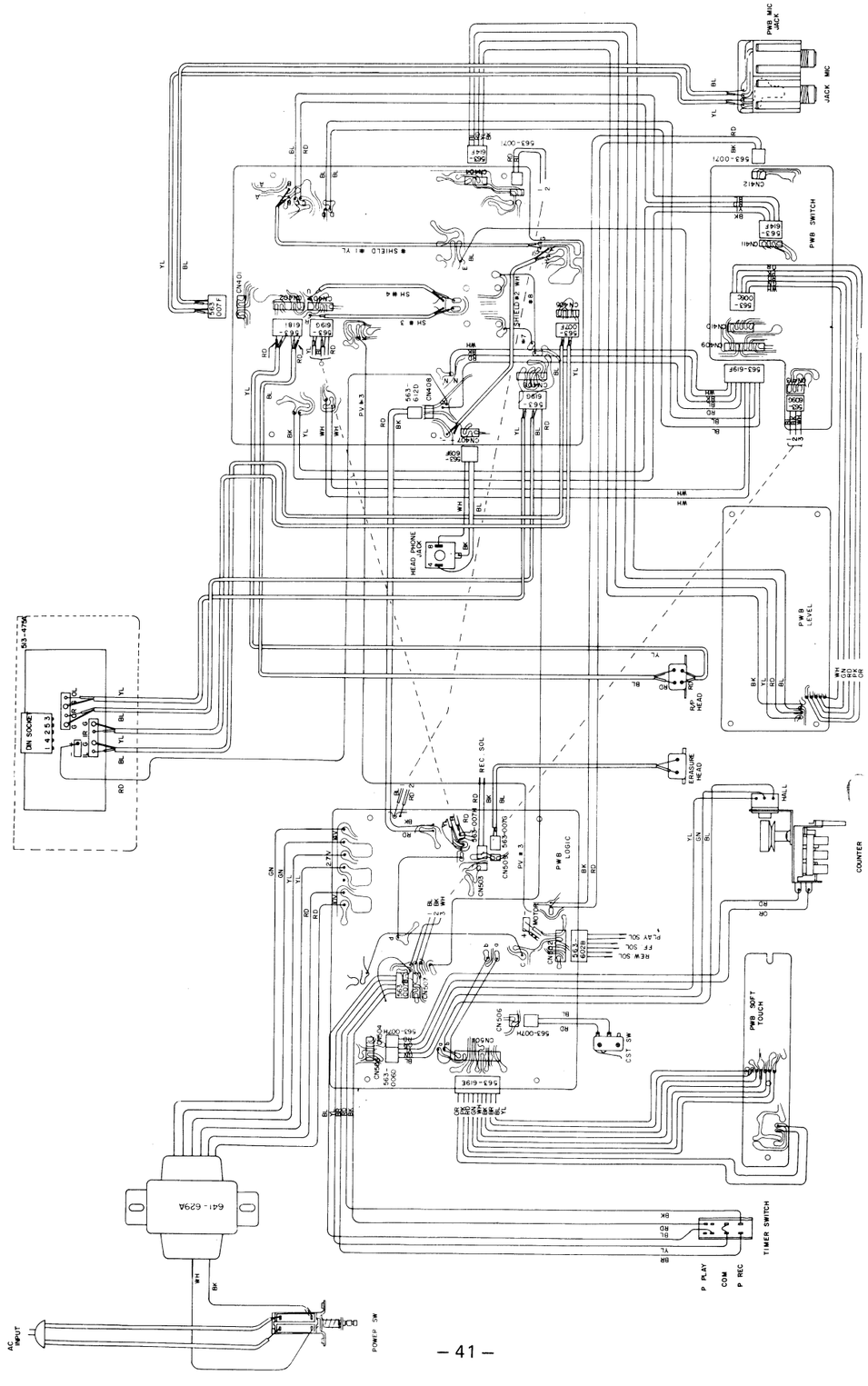
EXPLODED VIEW



SCHEMATIC DIAGRAM



WIRING DIAGRAM

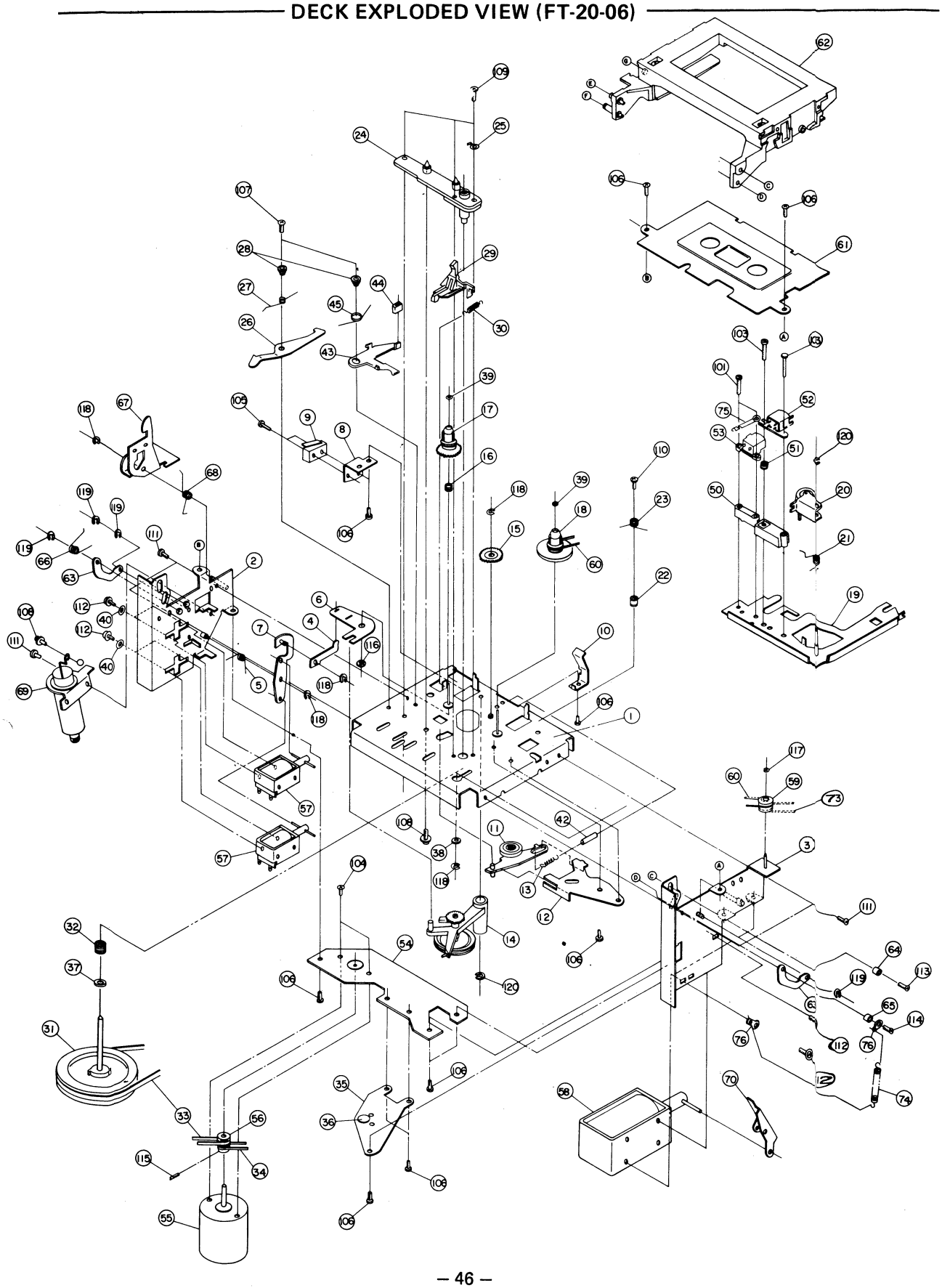


MECHANICAL PARTS LIST

NO.	PART NO.	DESCRIPTION
1.	258-383C	PANEL, FRONT
2.	472-604A	FELT
3.	245-018A	ESCUTCHEON, CASSETTE
4.	463-005A	LENS, COUNTER
5.	236-131A	WINDOW
6.	463-003A	LENS, LED
7.	246-026A	DECORATION KNOB
8.	341-138A	BUSHING, PUSH KNOB
9.	221-390A	COVER, SIDE
10.	226-028A	DOOR, CASSETTE-B
11.	226-027A	DOOR, CASSETTE-A
12.	273-249A	KNOB, CONTROL
13.	273-280A	KNOB, LEVEL-A
14.	273-281A	KNOB, LEVEL-B
15.	245-017A	ESCUTCHEON, SOFT TOUCH
16.	273-283A	KNOB, TOUCH-A
17.	273-284A	KNOB, TOUCH-B
18.	256-380A	PLATE, BACK UP
19.	273-238B	KNOB, PUSH
19.	423-261A	SHAFT POWER SW
20.	353-052B	SCREW, SPECIAL
21.	213-186A	CABINET
22.	321-434A	BRACKET, CST-L
23.	321-432A	BRACKET, CST-TOP
24.	321-433A	BRACKET, CST-R
25.	412-037A	DECK AY, CASSETTE
26.	517-002A	COUNTER MEMORY
27.	451-011A	BELT COUNTER
29.	353-027K	SCREW, SPECIAL
30.	321-435A	BRACKET, SLIDE SW
31.	552-607A	SW, SLIDE
32.	323-043A	FIXER, JACK
33.	572-601A	JACK HEADPHONE
35.	321-440A	BRACKET, PWB-L
36.	323-614A	FIXER, JACK
37.	572-153A	JACK MIC
38.	273-279A	KNOB EJECT
39.	423-260A	SHAFT, BUSNING
40.	321-438A	BRACKET, EJECT-B
41.	321-437A	BRACKET, EJECT-A
44.	321-436A	BRACKET, POWER SW
45.	554-610C	SWITCH, POWER

NO.	PART NO.	DESCRIPTION
46.	313-177A	CHASSIS, FRONT
47.	554-606F	SW, UNI-PUSH SUF74 12.5MTG
48.	315-168A	FRAME (R) SIDE
49.	691-067A	SOLENOID, TDS-10A
50.	321-442A	BRACKET, REC
51.	315-170A	FRAME, CENTER
52.	315-169A	FRAME (L) SIDE
53.	313-178A	CHASSIS BOTTOM
54.	264-004A	LEG
55.	477-013A	RUBBER, LEG
56.	258-385B	PANEL, BACK
60.	324-348A	HOLDER CORD
62.	681-003D	CORD, POWER
64.	641-629C	TRANS, POWER
69.	513-472A	PWB, LOGIC
70.	513-471A	PWB, MAIN
72.	513-474A	PWB, SWITCH
73.	513-473A	PWB, PEAK LEVEL
74.	513-476A	PWB, NETWORK
75.	321-441A	BRACKET, DIN JACK
76.	573-051A	SOCKET AY, DIN
	513-475A	PWB, SOFT TOUCH
	321-439A	BRACKET, PWB-R
	558-013A	SW, TACT KHC 10902
	653-604A	LED, SIEMENS LD30A RD
	563-619E	CONNECTOR AY

DECK EXPLODED VIEW (FT-20-06)



ELECTRICAL PARTS LIST

PWB AY, MAIN (511-471A)

SYMBOL NO.	PART NO.	DESCRIPTION
	691-067A	Solenoid, TDS-10A-10A, DC 24V
VR401, 402	611-071D	VR, DM20R-50KB x 2
VR403	611-609B	VR, GM80R=50KB x 2
S201, 301	552-035B	SW, Slide
CN408	561-009B	Connector Male
CN407	561-009C	Connector Male
CN401, 404, 406	561-009D	Connector Male, 4 Pin
CN403, 406	561-009E	Connector Male (5P)
CN402	561-009A	Connector Male, Molex
IC201, 301	668-059A	IC, NE646B Dolby Signetics
T204, 304	638-601E	Coil Trap 60KHz
T201, 202, 203, 301, 302, 303	638-601C	Coil Trap
	564-022A	Plug AY, 12Pin
TR201, 202, 301, 302	662-606C	TR, Motorola MPS9635C
TR203, 303, 209, 309	662-603B	TR, Fair-Motor, MPSA06
TR204, 5, 6, 7, 8 TR304, 5, 6, 7, 8	662-034D	TR, Motorola MPS96321
SR201, 202, 301, 302	613-002G	VR, Semi-fixed 47KB
SR203, 303	613-002C	VR, Semi-fixed 4.7KB
D201, 202, 301, 302	651-001D	Diode, 1S188FM-1
R201, 301, 261, 361	RD153J09	R, Carbon Film 15K-J¼WM
R202, 302	RD100J09	R, Carbon Film 10-J¼WM
R203, 303	RD104J09	R, Carbon Film 100K-J¼WM
R204, 304, 216, 316, 223 323, 247, 347	RD473J09	R, Carbon Film 47K-J¼WM
R205, 305	RD121J09	R, Carbon Film 120-J¼WM
R206, 306	RD823J09	R, Carbon Film 82K-J¼WM
R207, 307, 212, 312	RD822J09	R, Carbon Film 8.2K-J¼WM
R208, 308, 213, 313	RD122J09	R, Carbon Film 1.2K-J¼WM
R209, 309	RD154J09	R, Carbon Film 150K-J¼WM
R210, 310	RD332J09	R, Carbon Film 3.3K-J¼WM
R211, 311, 248, 348	RD222J09	R, Carbon Film 2.2K-J¼WM
R214, 215, 314, 315, 226, 326	RD273J09	R, Carbon Film 27K-J¼WM
R217, 218, 317, 318, 252 352, 244, 344	RD102J09	R, Carbon Film 1K-J¼WM
R219, 220, 319, 320,	RD104J09	R, Carbon Film 100K-J¼WM
R221, 321	RD181J09	R, Carbon Film 180-J¼WM
R222, 322, 243, 343	RD332J09	R, Carbon Film 3.3K-J¼WM
R260, 360	RD101J09	R, Carbon Film 100-J¼WM

SYMBOL NO.	PART NO.	DESCRIPTION
R224, 324, 240, 340	RD184J09	R, Carbon Film 180K-J¼WM
R225, 325, 245, 345	RD274J09	R, Carbon Film 270K-J¼WM
R228, 328, 255, 355	RD272J09	R, Carbon Film 2.7K-J¼WM
R229, 329	RD560J09	R, Carbon Film 56-J¼WM
R230, 330, 246, 346	RD562J09	R, Carbon Film 5.6K-J¼WM
R231, 331	RD682J09	R, Carbon Film 6.8K-J¼WM
R232, 332	RD183J09	R, Carbon Film 18K-J¼WM
R241, 341, 254, 354	RD563J09	R, Carbon Film 56K-J¼WM
R242, 342	RD122J09	R, Carbon Film 1.2K-J¼WM
R249, 349	RD333J09	R, Carbon Film 33K-J¼WM
R250, 350	RD151J09	R, Carbon Film 150-J¼WM
R253, 353	RD823J09	R, Carbon Film 82K-J¼WM
R227, 327	RD154J09	R, Carbon Film 150K-J¼WM
R258, 358	RD822J09	R, Carbon Film 8.2K-J¼WM
CN409	563-619F	Connector Assy
CN503	563-007H	Connector AY Molex (2P)
C208, 308	CQ223J01	C, Polyester 0.02MF-J 50V
C219, 319	CL562F01	C, Polypropylene 0.0056MF-F 50V
C221, 321	CL472F01	C, Polypropylene 0.0047MF-F 50V
C220, 320	CL273F01	C, Polypropylene 0.027MF-F 50V
C224, 324	CQ473J01	C, Polyester 0.047MF-J 50V
C225, 325	CQ104J01	C, Polyester 0.1MF-J 50V
C232, 332	CQ123J01	C, Polyester 0.012MF-F 50V
C203, 303	CY102J01	C, Polystyrol 1000PF-JR
C201, 301	CY511J01	C, Polystryol 510PF-JR
C213, 313, 230, 330	CY121J01	C, Polystyrol 120PF-JR
C212, 312	CY392J01	C, Polystyrol 3900PF-JR
C214, 314	CY302J01	C, Polystyrol 3000PF-JR
C215, 315	CY272J01	C, Polystyrol 2700PF-JR
C206, 306, 240, 340	CC101J01	C, Ceramic CC 100PF-J SL 50V
CN411	563-614F	Connector AY Molex 4P
C351, 251, 250, 350	CE107C01	C Electrolytic 100MF 16V
C202, 302, 207, 307, 204, 304, 216, 217, 218, 316, 317, 318, 222, 223, 322, 323, 227, 327, 228, 328	CE106C01	C Electrolytic 10MF 16V
C241, 242, 243, 341, 342, 343, 244, 246, 247, 344, 346, 347, 248, 348	CE106C01	C, Electrolytic 10MF 16V

SYMBOL NO.	PART NO.	DESCRIPTION
C226, 326	CE334F01	C, Electrolytic 0.33MF 50V
C205, 305, 245, 345	CE476C01	C, Electrolytic 47MF 16V
C210, 310	CE227C01	C, Electrolytic 220MF 16V
C211, 311, 231, 331	CE105F01	C, Electrolytic 1MF 50V
C229, 329	CE107B01	C, Electrolytic 100MF 10V
C209, 309	CK103K02	C, Ceramic 0.01MF-K 50V
C288, 388	CQ102J01	C, Polyester 0.001MF-J 50V
R251, 351	RD471J09	R, Carbon Film 470-J¼WM

PWB AY, NETWORK (511-476A)

SYMBOL NO.	PART NO.	DESCRIPTION
IC601, 602	668-613A	IC, TA7120P (EQ)
R601, 602	RD822J09	R, Carbon Film 8.2K-J¼WM
R603, 604	RD563J09	R, Carbon Film 56K-J¼WM
R605, 606	RD153J09	R, Carbon Film 15K-J¼WM
R607	RD472J09	R, Carbon Film 4.7K-J¼WM
R609, 610	RD122J09	R, Carbon Film 1.2K-J¼WM
C603, 604	CC300J01	C, Ceramic 30PF-J
C601, 602	CE226C01	C, Electrolytic 22MF 16V
C605, 606	CE106C01	C, Electrolytic 10MF 16V
C609	CE336C01	C, Electrolytic 33MF 16V
C607, 608	CE107C01	C, Electrolytic 100MF 16V
CN601	561-009B	Connector Male
	563-007I	Connector Ay Molex (29)

PWB AY, LOGIC (511-472A)

SYMBOL NO.	PART NO.	DESCRIPTION
IC501	668-118A	IC, M54410P
TR501, 2, 4, 5, 7, 9, 10, 11, 12, 30, 31	665-884A	TR, Motorola LC1815-Y
TR506, 522, 524, 526	663-019A	TR, Fairchild MPSA13
TR523, 525	662-018B	TR Motorola MJE9450
TR503, 515	665-605E	TR MPS9682
TR003, 004, 401, 402, 001	665-882C	TR Sanken 2SC1827-Y
D501, 2, 3, 4, 5, 9, 10, 11, 12, 19	652-005B	Diode SW 1S2472R-OHM
D507, 513, 514, 515, 550	652-005B	Diode Rectifier 1N4002
ZD001	654-608C	Diode, Zener, ZPD5.1
ZD002	654-612B	Diode, Zener, Moto10V
ZD003	654-607E	Diode, Zener, ZPD-24
D001	654-607A	Diode Zener, ZPD-12
D001, 002, 003	652-612A	Diode Rectifier ZW02G12A
D506, 516, 517, 518	652-005A	Diode Rectifier 1N4001
R533	RD560J09	R, Carbon Film 56-J¼WM
R412	RD010J09	R, Carbon Film 1-J¼WM
R405, 406, 531, 530	RD104J09	R, Carbon Film 100K-J¼WM
R413, 414, 003, 005	RD100J03	R, Carbon Film 10-J½WP
R502, 004	RD102J09	R, Carbon Film 1K J¼WM
R501 503 512 516	RD822J09	R Carbon Film 8.2K J¼WM
R510, 511, 517, 520, 524, 527, 528	RD332J09	R, Carbon Film 3.3K-J¼WM
R522, 525, 001	RD182J09	R, Carbon Film 1.8K-J¼WM
R515	RD562J09	R, Carbon Film 5.6K-J¼WM
R508	RD561J09	R, Carbon Film 560-J¼WM
R507, 513	RD563J09	R, Carbon Film 56K-J¼WM
R521, 523, 526, 006	RD122J09	R, Carbon Film 1.2K-J¼WM
R535, 536	RD682J09	R, Carbon Film 6.8K-J¼WM
R529	RD103J09	R, Carbon Film 10K-J¼WM
R514	RD334J09	R, Carbon Film 330K-J¼WM
R518, 519, 511, 521	RD681J09	R, Carbon Film 680-J¼WM
R504	RD223J09	R, Carbon Film 22K-J¼WM
R505	RD333J09	R, Carbon Film 33-J¼WM
R506	RD124J09	R, Carbon Film 120K-J¼WM
R509	RD472J09	R, Carbon Film 4.7K-J¼WM
C406, 407	CY201J01	C, Polystrol 200PF-JR

SYMBOL NO.	PART NO.	DESCRIPTION
C405	CY222J03	C, Polystyrol 2200PF 100V
C401, 402,	CQ152J01	C, Polyster 0.0015MF-J 50V
C404	CY103J03	C, Polystyrol 1000PF JR 100V
C403	CY152J01	C, Polystyrol 1500PF-JR
C408	CE107E01	C, Electrolytic 100MF 35V
C501, 2, 3, 4, 6	CK103K02	C, Ceramic 0.01MF-K 50V
C505	CE474F01	C, Electrolytic 0.47MF 50V
C507, 508, 514	CE225C01	C, Electrolytic 2.2MF 16V
C513	CC301J01	C, Ceramic CC 300PF-J
C509, 512	CE226C01	C, Electrolytic 22MF-16V
C510	CE106C01	C, Electrolytic 10MF-16V
C520	CE476E01	C, Electrolytic 47MF-35V
C004	CE228C01	C, Electrolytic 2200MF 16V
C002, 005, 006	CE337C01	C, Electrolytic 330MF 16V
C009	CE477E01	C, Electrolytic 470MF 35V
C008	CE227E01	C, Electrolytic 220MF 35V
C007	CE108F01	C, Electrolytic 1000MF 50V
T401	634-608B	Coil, Bias OSC 1.7MH
SR401, 402	613-002E	VR, Semi-Fixed 150kB
D520, 521, 522, 523	654-012A	Diode, Biasing, GSD0043
C515	CE334D01	C, Electrolytic 0.33MF 25V
C511, 550	CE226C01	C, Electrolytic 22MF 16V
C516, 517, 518	CE476E01	C, Electrolytic 47MF 35V
TR508, 521	665-805A	TR, Motorola TIP32B
C001	CE108D01	C, Electolytic 1000MF 25V
C003	CE477C01	C, Electrolytic 470MF 16V
TR514	665-884A	TR, Motorola LC1815-Y
	564-022A	Plug, AY, 12 Pin
CN507	561-009E	Connector Male (5P)
CN502	561-009A	Connector Male, Molex 3022-06A
	561-009H	Connector Male, Male (Molex 9P)
CN408	563-612D	Connector AY (2P)
CN412	563-007I	Connector AY Molex (29)
CN403	563-619G	Connector Assy
CN413	563-609G	Connector Assy
CN503, 504, 506, 509	561-009B	Connector Male
	586-101A	Fuse Holder
	585-110C	Fuse 250V 1.25A
	585-113C	Fuse 250V 2.0A
	585-106C	Fuse 250V 630mA
	563-007I	Connector Ay Molex

PWB AY, PEAK LEVEL (511-473A)

SYMBOL NO.	PART NO.	DESCRIPTION
IC202, 302	668-056A	IC UAA180 (LED DISPLAY DRIVE)
D401, 203, 303	652-605B	DIODE SW 1S2472 R-OHM
LD401	653-604B	LED, SIEMENS LD37A GN
LD402, 403, 404, 405	653-604A	LED, SIEMENS LD30A RD
LD201, 202, 301, 302	653-103B	LED, ARRAY NATIONAL LN03202P
LD203, 303	653-604A	LED, ARRAY NATIONAL LN02202P
R256, 356	RD223J09	R, CARBON FILM 22K-J¼WM
R257, 357	RD682J09	" 6.8K-J¼WM
R409	RD105J09	" 1M-J¼WM
R410	RD272J09	" 2.7K-J¼WM
R777	RD390J09	" 39-J¼WM
CN404	563-614F	CONNECTOR AY MOLEX 4P
CN410	563-619H	CONNECTOR AY MOLEX 5P

PWB AY, SWITCH (511-474A)

SYMBOL NO.	PART NO.	DESCRIPTION
	554-606F	SW, UNI-PUSH SUF74, 12,5
CN412	561-009B	CONNECTOR MALE
CN413	561-009C	"
CN411	561-009D	"
CN410	561-009E	"
CN409	561-009F	"
R407, 408	RD561J09	R, CARBON FILM 560-J¼WM
R401	RD220J03	" 22-J½WP
R404	RD471J03	" 470-J½WP
R403	RD331J03	" 330-J½WP
R402	RD271K03	" 270-J½WP
R238, 338, 234, 334	RD222J09	" 2.2K-J¼WM
R239, 339	RD122J09	" 1.2K-J¼WM
R237, 337	RD560J09	" 56-J¼WM
R235, 335, 233, 333	RD682J09	" 6.8K-J¼WM
R236, 336	RD272J09	" 2.7K-J¼WM
C237, 337, 234, 334	CQ123J01	C, POLYESTER 0.012MF-J 50V
C235, 335, 238, 338	CQ473J01	" 0.047MF-J 50V
C239, 339	CQ223J01	" 0.022MF-J 50V

DECK MECHANISM PARTS LIST (FT-20-06)

NO.	PART NO.	DESCRIPTION
1.	PBD 0566	CHASSIS ASS'Y
2.	PBD 0841	SIDE PLATE L ASS'Y
3.	PBD 0640	SIDE PLATE R ASS'Y
4.	PBE 14073	LINK PLATE B
5.	PBE 14084	SPRING
6.	PBE 14074	LINK PLATE C
7.	PBE 01190	LINK PLATE A ASS'Y
8.	PBE 14092	SWITCH PLATE
9.	AH 2522	MICRO SWITCH
10.	PBE 13722	CASSETTE HOLDER
11.	PBE 01055	IDLER ASS'Y
12.	PBE 14108	IDLER PLATE
13.	PBE 14258	T, SPRING
14.	PBD 0538	TENSION ASS'Y
15.	PBE 14337	IDLER GEAR
16.	PBE 13640	C, SPRING
17.	PBE 01054	S REEL ASS'Y
18.	PBE 01129	T REEL ASS'Y
19.	PBD 0570	HEAD BASE ASS'Y
20.	PBE 01191	PINCH ARM ASS'Y
21.	PBE 14081	PINCH ARM SPRING
22.	PBE 14066	COLLAR
23.	PBE 14082	SPRING
24.	PBE01192	SHAFT HOLDER ASS'Y
25.	PBE 13507	EARTH PLATE
26.	PBE 14107	INTER LEVER
27.	PBE 14090	SPRING
28.	PBE 14067	COLLAR
29.	PBC 1077	INTER LOCK
30.	PBE 14091	T SPRING
31.	PBD 1507	FLYWHEEL
32.	PBE 13023	C, SPRING
33.	PBE 14031	BELT
34.	PBE 14032	BELT
35.	PBE 14076	FLYWHEEL HOLDER ASS'Y
36.	PBE 14058	CAPSTAN SUPPORT
37.	PBE 13880	WASHER
38.	PGWF30A080050	WASHER
39.	PGWM16X040020	WASHER
40.	PGWF30A060050	WASHER
41.		
42.	PBE 14114	TUBE
43.	PBE 14272	BRAKE PLATE

NO.	PART NO.	DESCRIPTION
44.	PBE 14180	BRAKE CR
45.	PBE 6007	SPRING
46.		
47.		
48.		
49.		
50.	PBE 14077	HEAD STAND
51.	PBE 13666	C SPRING
52.		P/R HEAD
53.		ERASE HEAD
54.	PBE 14075	MOTOR BRACKET
55.	VFA2L66	MOTOR[
56.	PBE 14034	MOTOR PULLEY
57.	PBE 3883	SOLENOID
58.	PBE 3882	SOLENOID
59.	PBE 14099	PULLEY
60.	PBE 12865	BELT
61.	PBE 01196	BACK PLATE ASS'Y
62.	PBD 0638	LOADING CASE ASS'Y
63.	PBE 14106	LINK
64.	PBE 14121	COLLAR
65.	PBE 13394	COLLAR
66.	PBE 14089	SPRING,
67.	PBE 14105	EJECT LEVER
68.	PBE 14088	SPRING
69.	PBE 01374	CYLINDER ASS'Y
70.	PBE 14070	LEVER
71.		
72.		
73.	PBE 5016	BELT
74.	PBE 12929	T SPRING
75.	PBE 13261	LAG
76.	PBE 13794	LAG
77.		
101.	PGSN20A2015	B SCREW M2 x 15
102.		
103.	PGSN20A2012	B SCREW M2 x 12
104.	PGSP10A2603	SCREW M26 x 3
105.	PGSP10A2010	SCREW M2 x 10
106.	PGSD10A2605	DT SCREW M26 x 5

NO.	PART NO.	DESCRIPTION
107.	PGSD10A2606	DT SCREW M26 x 8
108.	PGST15A2606	F TAPPING SCREW M26 x 6
109.	PGSD10A2610	DT SCREW M26 x 10
110.	PGSP30A2612	K SCREW M26 x 12
111.	PGSD10A3005	DT SCREW M3 x 5
112.	PGSP20A3004	B SCREW M3 x 4
113.	PGST10A3010	TAPPING SCREW M3 x 10
114.	PGST10A2610	TAPPING SCREW M26 x 10
115.	PGSS01A2003	SCREW M2 x 3
116.	PGRS30P	CS RING CS-3
117.	PGRE15A	E RING E-15
118.	PGRE25A	E RING E-25
119.	PGRE30A	E RING E3
120.	PGRE40A	E RING E-4

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